SAMPLING DATA

SAMPLE PROPOSAL
FIT REGION V

Confirmed X
LABS Ass ___
Paperwork out ___

1. Date Form Completed 5/15/89
2. Account # FIL0055SB TDD # F05-8612-077
   EPA I.D. # ILD059995423
3. Site Name, City, State Swift Ag Chem Fairmont City Plant
   Fairmont City, Il
4. Team Leader R. Bayer Sampler J. Dickson
5. Number and Type of Samples:
   Soil/Sediment 12 Surface Water ___ Ground Water ___
   Residential/Municipal Wells ___ Other ___
   Number of Blanks ___ Number of Duplicates ___
6. RAS Parameters Requested:
   A/B/N ✓ Pest/PCB ✓ Volatiles ✓ Metals ✓ Cyanide ✓
   SAS Parameters Requested: ___
7. Expected Sampling Date(s): ~~June 27~~ w/o July ~~18+19~~ ~~30~~ 31
   Expected Shipping Date(s): ~~June 27~~ w/o July 31
8. Lab Used For Analysis: Organic Soil WADS
   Inorganic Soil ENSECO (RMAL)
   SAS ___
9. Case Number 12464 SAS Number ___
10. Airbill Numbers:
    Organic Lab WADS 273421775 4 # Coolers 1 # Samples 12 > 8/2
    Inorganic Lab RMAL 4260355713 # Coolers 1 # Samples 12
    CRL/SAS Lab ___ # Coolers ___ # Samples ___

Complete

Swift Ag. Chem Fairmont City

RECEIPT FOR SAMPLES

U.S. EPA, 230 S. Dearborn St., Chicago, IL 60604

U. S. EPA ID NO ILD059795423

PROJ. ACCT. NO. FIL0055SB

TDD FO5-8612-077

SPLIT SAMPLES N/A ACCEPTED( ) DECLINED( )

FACILITY/OCCUPANT NAME

Scott M. McL

FACILITY/OCCUPANT ADDRESS

2531 Kingshighway, Fairmont City, IL 62201

SAMPLE NUMBER	DATE	TIME	SPLIT SAMPLES (✓)	OTR#	ITR#	DESCRIPTION OF SAMPLE LOCATIONS	(✓) SEMIVOLATILES	PESTICIDES/PCBS	VOLATILES	METALS	CYANIDE			MATRIX
S11	8/2/89	14:30	—	EFA22	DEEP22	S11 ditch "south" end	✓	✓	✓	✓	✓			Soil/Sediment
														follow-up

TRANSFERRED BY

Regina Dreyer 8/2/89 3:30

(Signature) (Date) (Time)

RECEIVED BY:

(Signature) (Date) (Time)

DISTRIBUTION
WHITE: FIT SITE FILE
YELLOW: FACILITY/OCCUPANT
GREEN: FIT SAMPLE MANAGEMENT
PINK: U.S. EPA

TITLE TELEPHONE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant FOS-8612-077

CASE NUMBER 12411

SAMPLE #/STATION LOCATION S1

SAMPLING DATE 8/2/89 SAMPLING TIME 1100

ORGANIC TRAFFIC NUMBER EFA 12

INORGANIC TRAFFIC NUMBER MEEF 12

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz. wide mouth	Ext.	S-156301	F9158524
"	M/C	302	"
120ml wide mouth	VOA	303	G8200074
	VOA	304	"

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: brown clay with white quartz sand and small red-white pebbles

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS NA

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant F05-8612-077

CASE NUMBER 12411

SAMPLE #/STATION LOCATION S2

SAMPLING DATE 8/2/89 SAMPLING TIME 1110

ORGANIC TRAFFIC NUMBER EFA 13

INORGANIC TRAFFIC NUMBER MEEF 13

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz. widemouth	Ext.	S-156305	F9158524
"	m/c	06	"
120 ml widemouth	VOA	07	6820074
"	VOA	08	"

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: braun sand some small white pebbles

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS NA

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant FOS-8612-077

CASE NUMBER 13411

SAMPLE #/STATION LOCATION S3

SAMPLING DATE 8/2/89 SAMPLING TIME 1130

ORGANIC TRAFFIC NUMBER EFA 14

INORGANIC TRAFFIC NUMBER MEEF 14

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz wide mouth	Ext	5-156309	F9158524
"	m/c	10	"
120 ml wide mouth	VOG	"	G8200074
"	VOA	12	"

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: dark brown sandy small white pebbles in soil

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS NA

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant FOS-8612-077

CASE NUMBER 13411

SAMPLE #/STATION LOCATION S4

SAMPLING DATE 8/2/89 SAMPLING TIME 1140

ORGANIC TRAFFIC NUMBER EFA 15

INORGANIC TRAFFIC NUMBER MEEF 15

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz wide mouth	Ext	5-156313	F9158524
"	m/c	14	"
120 ml wide mouth	VOA	15	G8200074
"	VOA	16	"

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: micaceous sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS NA

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant FOS-8612-077

CASE NUMBER 13411

SAMPLE #/STATION LOCATION S5

SAMPLING DATE 8/2/89 SAMPLING TIME 1235

ORGANIC TRAFFIC NUMBER EFA 16

INORGANIC TRAFFIC NUMBER MEEF 16

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz. wide mouth	Ext	S-156317	F9158524
" "	m/c	18	"
120 ml wide mouth	VOA	19	G82000Z4
"	VOA	20	"

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: dark brown sandy soil some small pebbles

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS NA

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant FOS-8612-077

CASE NUMBER 12411

SAMPLE #/STATION LOCATION S6

SAMPLING DATE 8/2/89 SAMPLING TIME 1250

ORGANIC TRAFFIC NUMBER EFA 17

INORGANIC TRAFFIC NUMBER MEEF 17

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz w.d.mouth	Ext.	S-156321	F915 8524
"	m/c	22	"
120ml wide mouth	VOA	23	G820007F
"	VOA	24	"

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: dark grey-green silt

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS N.A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant FOS-8612-077

CASE NUMBER 12411

SAMPLE #/STATION LOCATION 57

SAMPLING DATE 8/2/89 SAMPLING TIME 1305

ORGANIC TRAFFIC NUMBER EFA 18

INORGANIC TRAFFIC NUMBER MEEF 18

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz widemouth	Ext	5-156325	F9158524
"	m/c	26	"
120 ml widemouth	VOA	27	G8200074
	VOA	28	"

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: dark grey-green silt

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS N.A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant FOS-8612-077

CASE NUMBER 13411

SAMPLE #/STATION LOCATION 58

SAMPLING DATE 8/2/89 SAMPLING TIME 1315

ORGANIC TRAFFIC NUMBER EFA 19

INORGANIC TRAFFIC NUMBER MEEF 19

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz wide mouth	EXT	S-156329	F9158524
"	M/C	30	"
120 ml wide mouth	VOA	31	D8202184
	VOA	32	"

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: dark grey-green silt.

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS NA

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant E05-8612-077

CASE NUMBER 12411

SAMPLE #/STATION LOCATION 59

SAMPLING DATE 8/2/89 SAMPLING TIME 1400

ORGANIC TRAFFIC NUMBER EFA 20

INORGANIC TRAFFIC NUMBER MEEF 20

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz. wide mouth	EXT	5-156 333	F9158 524
"	m/c	34	"
120 ml wide mouth	VOA	35	D8202 184
"	VOA	36	"

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: med gray sandy silt

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS NA

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant FOS-8612-077

CASE NUMBER 12411

SAMPLE #/STATION LOCATION S10

SAMPLING DATE 8/2/89 SAMPLING TIME 1410

ORGANIC TRAFFIC NUMBER EFA 21

INORGANIC TRAFFIC NUMBER MEEF 21

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz wide mouth	EXT	5-156 337	F9158524
"	m/C	38	"
120 ml wide mouth	VOA	39	D8252094
"	VOA	40	D8257134

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: grey to light grey mottled sandy silt

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS NA

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant FOS-8612-077

CASE NUMBER 12411

SAMPLE #/STATION LOCATION S11

SAMPLING DATE 8/2/89 SAMPLING TIME 1430

ORGANIC TRAFFIC NUMBER EFA 22

INORGANIC TRAFFIC NUMBER MEEF 22

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz widemouth	EXT	S-156341	F9158524
"	M/C	42	"
120 ml widemouth	VOA	43	D8202184
"	VOA	44	D8202054

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: black silt

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS NA

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Swift Ag Chem. Fairmont City Plant FOS-8612-077

CASE NUMBER 12411

SAMPLE #/STATION LOCATION S12

SAMPLING DATE 8/2/89 SAMPLING TIME 1435

ORGANIC TRAFFIC NUMBER EFA 23

INORGANIC TRAFFIC NUMBER MEEF23

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz wide mouth	Ext	S-156345	F9158524
"	m/c	46	"
120 ml wide mouth	VOA	47	G8200074
	VOA	48	D8202164

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: brown-tan loamy soil with some clay

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: none

INSTRUMENT READINGS NA

pH

CONDUCTIVITY

TEMPERATURE

U. S. EPA ID NO ILD059995423

PROJ. ACCT. NO. FIL0055SB

TDD F05-8612-077

SPLIT SAMPLES ACCEPTED( ) DECLINED(✓)

FACILITY/OCCUPANT NAME
Swift Ag Chem Fairmont City Plant

FACILITY/OCCUPANT ADDRESS
Swift Ag Chem Fairmont City Plant
2501 N. Kings Hwy
Fairmont City, Illinois
62202

RECEIPT FOR SAMPLES

U.S. EPA, 230 S. Dearborn St., Chicago, IL 60604

SAMPLE NUMBER	DATE	TIME	SPLIT SAMPLES (✓)	OTR*	ITR*	DESCRIPTION OF SAMPLE LOCATIONS	SEMIVOLATILES (✓)	PESTICIDES/PCBS (✓)	VOLATILES (✓)	METALS (✓)	CYANIDE (✓)			MATRIX
S1	8/2/89	11:00		EFA 12	MEEF 12	S1	✓	✓	✓	✓	✓			Soil
S2	8/2/89	11:10		EFA 13	MEEF 13	S2	✓	✓	✓	✓	✓			Soil
S3	8/2/89	11:30		EFA 14	MEEF 14	S3	✓	✓	✓	✓	✓			soil
S4	8/2/89	11:40		EFA 15	MEEF 15	S4	✓	✓	✓	✓	✓			soil
S5	8/2/89	12:55		EFA 16	MEEF 16	S5	✓	✓	✓	✓	✓			soil
S6	8/2/89	12:50		EFA 17	MEEF 17	S6	✓	✓	✓	✓	✓			soil/sed
S7	8/2/89	13:05		EFA 18	MEEF 18	S7	✓	✓	✓	✓	✓			soil/sed
S8	8/2/89	13:15		EFA 19	MEEF 19	S8	✓	✓	✓	✓	✓			soil/sed
S9	8/2/89	14:00		EFA 20	MEEF 20	S9	✓	✓	✓	✓	✓			soil/sed
S10	8/2/89	14:10		EFA 21	MEEF 21	S10	✓	✓	✓	✓	✓			soil/sed
~~S11~~	~~8/2/89~~			~~EFA 22~~	~~MEEF 22~~	~~S11~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~			~~soil/sed~~
S12	8/2/89	14:35		EFA 23	MEEF 23	S12	✓	✓	✓	✓	✓			soil

F: 8/2/89

TRANSFERRED BY
Regina Payen 8/2/89 15:15
(Signature) (Date) (Time)

RECEIVED BY:
(Signature) (Date) (Time)

DISTRIBUTION
WHITE: FIT SITE FILE
YELLOW: FACILITY/OCCUPANT
GREEN: FIT SAMPLE MANAGEMENT
PINK: U.S. EPA

TITLE TELEPHONE

IL-55-06

ILLINOIS AIR POLLUTION CONTROL BOARD

cc 80 FORM B – SOURCE OPERATION DATA

SOURCE OPERATION NUMBER 06 — cc 79 = CARD IDENTIFICATION – PUNCH: 9 — I.D. NO cc 1 – 6

A. DESCRIBE SOURCE OPERATION AND TYPE OF PROCESS EQUIPMENT.

New equipment for controlling emissions from reactor - agglomerator combined exit air

Nominal 12-12-12 as a typical large tonnage grade

OFFICE USE ONLY — CARD CO. 10 11 12 13 — BEC NUMBER 14 15 16 17 — BEC FACTOR

B. RAW MATERIALS USED IN SOURCE OPERATION FOR NORMAL THROUGHPUT CAPACITY. NORMAL OPERATION IS Card Cols. 7 8 9: 2 0 TPH % OF MAXIMUM CAPACITY. 100

MATERIAL	STARTING WEIGHT	MATERIAL	STARTING WEIGHT
1. Ammonium Sulfate	16,760 lbs./hr.	5. Anhydrous Ammonia	1,920 lbs./hr.
2. Triple Super	920 lbs./hr.	6. Sulfuric Acid	2,160 lbs./hr.
3. Potassium Chloride	8,000 lbs./hr.	7. Phosphoric Acid	6,800 lbs./hr.
4. Neutro-Phos	2,000 lbs./hr.	8. Filler	2,700 lbs./hr.

C. EMISSION: Check types of discharge that can possibly be emitted from process or equipment directly to atmosphere through stacks or ducts.

cc 18 - 1 [X] Solid, particulate matter — cc 19 - 2 [X] Steam — cc 20 - 3 [X] Gases, vapors or fumes — cc 21 - 4 [X] Odors of any type — cc 22 - 5 [X] Mists or Aerosols — cc 23 - 6 [ ] None

SOURCE OPERATION DISCHARGES – cc 24: 1 [X] From Stack 2 [ ] At Ground Level 3 [ ] From Vents or other Opening

25 26 27 28: 3 8 (FT.) STACK HEIGHT ABOVE GRADE

D. PROCESS WEIGHT RATE (lbs./hr.) cc 29 30 31 32 33 34 35: 7 2 0 0 0

E. OPERATION TIME hrs./day cc 36 37 38: 1 6

F. INLET GAS RATE (SCFM) 9,000

G. INLET LOADING GRAINS/SCF ... To wet scrubber..... 39 40 41 42: 0 .2 8 5

H. lbs/1000 lbs GAS 58 59 60 61:

I. PRIMARY COLLECTOR: (See Code Below) 43 44: 0 6

J. SECONDARY COLLECTOR: (See Code Below) 62 63:

Card Co. 45 46 47: 9 0

K. CO. COLS. 48 49 50:

CARD COLS 51 52 53 54 55 56 57:

L. OPERATION IS [X] Continuous [ ] Batch Cycle per batch (hrs.).....

M. MEASURED – ESTIMATED – EMISSIONS TO ATMOSPHERE (lbs/hr) ..... 67 68 69 70 71: 2 .2

N. ALLOWABLE EMISSIONS TO ATMOSPHERE (lbs/hr.) ..... 72 73 74 75 76: 2 .2

INSTRUCTIONS: (NOTE – Dotted lines indicate position of decimal point. Use additional sheets for miscellaneous comments.)

Item A. Describe your source operation and type of process equipment.

B. List all starting raw materials charged, including solid fuels. Specify lbs/hr. For batch operations specify lbs.

C. Check appropriate boxes and enter discharge information.

D. Indicate the total weight rate of all materials introduced into the source operation. Solid fuels charged will be considered as part of the process weight but liquid and gaseous fuels and combustion air will not. Include recycled material. -- 80% of production.

E. Enter normal operational hours per day for this source operation.

F. Enter rate of gas inlet to collection equipment in standard cubic feet per minute.

G&H. Enter particulate concentration of gas inlet to collection equipment in either column G or H.

I&J. List collection equipment serving the process, code as follows:

01–Absorber 02–Adsorber 03–Catalytic burner 04–Afterburner 05–Spray Chamber 06–Scrubber 07–Packed Tower 08–Venturi Scrubber 09–Settling Chamber 10–Cyclone 11–Multiclone 12–Rotoclone 13–Baghouse 14–Precipitator 15–Mesh 16–Other

K. Enter estimate of collector efficiency (%).

L. Check type of operation. For batch operation, enter hours per batch cycle.

M. Enter estimate of particulates emitted to the atmosphere from this operation in lbs/hr. Circle Measured or Estimated.

N. Enter allowable emission from Table I, Chapter III of the Regulations.

ILLINOIS POLLUTION CONTROL BOARD

cc 80 FORM B – SOURCE OPERATION DATA

SOURCE OPERATION NUMBER 12 — cc 79 = CARD IDENTIFICATION – PUNCH: 9 — I.D. NO cc 1 – 6

A. DESCRIBE SOURCE OPERATION AND TYPE OF PROCESS EQUIPMENT.

Existing equipment for controlling emissions from dryer-cooler combined exit air

Nominal 12-12-12 as a typical large tonnage grade

OFFICE USE ONLY — CARD COLS. 10 11 12 13 — BEC NUMBER — 14 15 16 17 — BEC FACTOR

B. RAW MATERIALS USED IN SOURCE OPERATION FOR NORMAL THROUGHPUT CAPACITY. NORMAL OPERATION IS Card Cols. 7 8 9: 2 0 TH % OF MAXIMUM CAPACITY. 100

MATERIAL	STARTING WEIGHT	MATERIAL	STARTING WEIGHT
1. Ammonium Sulfate	16,760 lbs./hr.	5. Anhydrous Ammonia	1,920 lbs./hr.
2. Triple Super	920 lbs./hr.	6. Sulfuric Acid	2,160 lbs./hr.
3. Potassium Chloride	8,000 lbs./hr.	7. Phosphoric Acid	6,800 lbs./hr.
4. Neutro-Phos	2,000 lbs./hr.	8. Filler	2,700 lbs./hr.

C. EMISSION: Check types of discharge that can possibly be emitted from process or equipment directly to atmosphere through stacks or ducts.

cc 18 - 1 [X] Solid, particulate matter — cc 20 - 3 [X] Gases, vapors or fumes — cc 22 - 5 [X] Mists or Aerosols

cc 19 - 2 [X] Steam — cc 21 - 4 [X] Odors of any type — cc 23 - 6 [ ] None

SOURCE OPERATION DISCHARGES – cc 24: 1 [X] From Stack 2 [ ] At Ground Level 3 [ ] From Vents or other Opening

cc 25 26 27 28: 3 8 (FT.) STACK HEIGHT ABOVE GRADE

D. PROCESS WEIGHT RATE (lbs./hr.) — cc 29 30 31 32 33 34 35: 7 2 0 0 0

E. OPERATION TIME hrs/day — cc 36 37 38: 1 6

COLLECTION EQUIPMENT

F. INLET GAS RATE (SCFM) — cc 39 40 41 42: 3 2,0 0 0

G. INLET LOADING — To dryer-cooler dry cyclones. GRAINS/SCF — cc 43 44: 9 . 3

H. lbs/1000 lbs GAS — cc 45 46 47 48: 1 0 . 1 2

I. PRIMARY COLLECTOR: (See Code Below) — cc 49 50: 9 0

J. SECONDARY COLLECTOR: (See Code Below) — cc 51 52: 9 4

K. Card Cols. 53 54 55

L. OPERATION IS [X] Continuous [ ] Batch — Cycle per batch (hrs.) — CD. COLS. 56 57 58

CARD COLS 59 60 61 62 63 64 65 66

M. MEASURED – ESTIMATED – EMISSIONS TO ATMOSPHERE (lbs/hr) — cc 67 68 69 70 71: 1 5.36

N. ALLOWABLE EMISSIONS TO ATMOSPHERE (lbs/hr.) — cc 72 73 74 75 76: 1 5.36

INSTRUCTIONS: (NOTE – Dotted lines indicate position of decimal point. Use additional sheets for miscellaneous comments.)

Item A. Describe your source operation and type of process equipment.

B. List all starting raw materials charged, including solid fuels. Specify lbs/hr. For batch operations specify lbs.

C. Check appropriate boxes and enter discharge infomation.

D. Indicate the total weight rate of all materials introduced into the source operation. Solid fuels charged will be considered as part of the process weight but liquid and gaseous fuels and combustion air will not. Include recycled material. -- 80% of production.

E. Enter normal operational hours per day for this source operation.

F. Enter rate of gas inlet to collection equipment in standard cubic feet per minute.

G&H. Enter particulate concentration of gas inlet to collection equipment in either column G or H.

I&J. List collection equipment serving the process, code as follows:

01–Absorber 02–Adsorber 03–Catalytic burner 04–Afterburner 05–Spray Chamber 06–Scrubber 07–Packed Tower 08–Venturi Scrubber 09–Settling Chamber 10–Cyclone 11–Multiclone 12–Rotoclone 13–Baghouse 14–Precipitator 15–Masking 16–Other

K. Enter estimate of collector efficiency (%).

L. Check type of operation. For batch operation, enter hours per batch cycle.

M. Enter estimate of particulates emitted to the atmosphere from this operation in lbs/hr. Circle Measured or Estimated.

N. Enter allowable emission from Table I, Chapter III of the Regulations.

ILLINOIS AIR POLLUTION CONTROL BOARD

cc 80 FORM B – SOURCE OPERATION DATA

I.D. NO

SOURCE OPERATION NUMBER 06 — cc 79 = CARD IDENTIFICATION – PUNCH: 9 — cc 1 – 6

A. DESCRIBE SOURCE OPERATION AND TYPE OF PROCESS EQUIPMENT.

New equipment for controlling emissions from reactor – agglomerator combined exit air

Nominal 12-12-12 as a typical large tonnage grade

OFFICE USE ONLY — CARD CODE — BEC NUMBER — BEC FACTOR

B. RAW MATERIALS USED IN SOURCE OPERATION FOR NORMAL THROUGHPUT CAPACITY. NORMAL OPERATION IS 20 TPH % OF MAXIMUM CAPACITY. 100

MATERIAL	STARTING WEIGHT	MATERIAL	STARTING WEIGHT
1. Ammonium Sulfate	16,760 lbs./hr.	5. Anhydrous Ammonia	1,920 lbs./hr.
2. Triple Super	920 lbs./hr.	6. Sulfuric Acid	2,160 lbs./hr.
3. Potassium Chloride	8,000 lbs./hr.	7. Phosphoric Acid	6,800 lbs./hr.
4. Neutro-Phos	2,000 lbs./hr.	8. Filler	2,700 lbs./hr.

C. EMISSION: Check types of discharge that can possibly be emitted from process or equipment directly to atmosphere through stacks or ducts.

cc 19 - 1 [X] Solid, particulate matter
cc 19 - 2 [X] Steam
cc 20 - 3 [X] Gases, vapors or fumes
cc 21 - 4 [X] Odors of any type
cc 22 - 5 [X] Mists or Aerosols
cc 23 - 6 [ ] None

SOURCE OPERATION DISCHARGES – cc 24: 1 [X] From Stack 2 [ ] At Ground Level 3 [ ] From Vents or other Openings

cc 25 26 27 28: 3 8 (FT.) STACK HEIGHT ABOVE GRADE

D. PROCESS WEIGHT RATE (lbs./hr.) cc 29 30 31 32 33 34 35: 7 2 0 0 0

E. OPERATION TIME hrs./day cc 36 37 38: 1 6

L. OPERATION 8760 hrs/yr
[X] Continuous
[ ] Batch Cycle per batch (hrs.)

CO. COLS. 48 49 50

CARD COLS 51 52 53 54 55 56 57: 9 0 0

COLLECTION EQUIPMENT

F. INLET GAS RATE (SCFM) 9,000

G. INLET LOADING GRAINS/SCF: To wet scrubber. cc 39 40 41 42: 0 2 8 5

H. lbs/1000 lbs GAS cc 58 59 60 61

I. PRIMARY COLLECTOR: cc 43 44: 0 6 (See Code Below) — K. cc 45 46 47: 9 0

J. SECONDARY COLLECTOR: cc 62 63 (See Code Below) — K. cc 64 65 66

M. MEASURED – ESTIMATED – EMISSIONS TO ATMOSPHERE (lbs/hr) cc 67 68 69 70 71: 2 2

N. ALLOWABLE EMISSIONS TO ATMOSPHERE (lbs/hr.) cc 72 73 74 75 76: 4 2

1.37

INSTRUCTIONS: (NOTE – Dotted lines indicate position of decimal point. Use additional sheets for miscellaneous comments.)

Item A. Describe your source operation and type of process equipment.

B. List all starting raw materials charged, including solid fuels. Specify lbs/hr. For batch operations specify lbs.

C. Check appropriate boxes and enter discharge information.

D. Indicate the total weight rate of all materials introduced into the source operation. Solid fuels charged will be considered as part of the process weight but liquid and gaseous fuels and combustion air will not. Include recycled material. -- 80% of production.

E. Enter normal operational hours per day for this source operation.

F. Enter rate of gas inlet to collection equipment in standard cubic feet per minute.

G&H. Enter particulate concentration of gas inlet to collection equipment in either column G or H.

I&J. List collection equipment serving the process, code as follows:

01-Absorber 02-Adsorber 03-Catalytic burner 04-Afterburner 05-Spray Chamber 06-Scrubber 07-Packed Tower 08-Venturi Scrubber 09-Settling Chamber 10-Cyclone 11-Multiclone 12-Roteclone 13-Baghouse 14-Precipitator 15-Mechanical 16-Other

K. Enter estimate of collector efficiency (%).

L. Check type of operation. For batch operation, enter hours per batch cycle.

ILLINOIS AIR POLLUTION CONTR OARD

cc 80 FORM B – SOURCE OPERATION DATA

SOURCE OPERATION NUMBER 12 — cc 79 = CARD IDENTIFICATION – PUNCH: 9 — I.D. NO cc 1 – 6

A. DESCRIBE SOURCE OPERATION AND TYPE OF PROCESS EQUIPMENT.

Existing equipment for controlling emissions from dryer-cooler combined exit air

Nominal 12-12-12 as a typical large tonnage grade

OFFICE USE ONLY — CARD COLS 10 11 12 13 — BEC NUMBER — 14 15 16 17 — BEC FACTOR

B. RAW MATERIALS USED IN SOURCE OPERATION FOR NORMAL THROUGHPUT CAPACITY. NORMAL OPERATION IS Card Cols. 7 8 9: 2 0 TH % OF MAXIMUM CAPACITY. 100

MATERIAL	STARTING WEIGHT	MATERIAL	STARTING WEIGHT
1. Ammonium Sulfate	16,760 lbs./hr.	5. Anhydrous Ammonia	1,920 lbs./hr.
2. Triple Super	920 lbs./hr.	6. Sulfuric Acid	2,160 lbs./hr.
3. Potassium Chloride	8,000 lbs./hr.	7. Phosphoric Acid	6,800 lbs./hr.
4. Neutro-Phos	2,000 lbs./hr.	8. Filler	2,700 lbs./hr.

C. EMISSION: Check types of discharge that can possibly be emitted from process or equipment directly to atmosphere through stacks or ducts.

cc 18 - 1 [X] Solid, particulate matter — cc 20 - 3 [X] Gases, vapors or fumes — cc 22 - 5 [X] Mists or Aerosols

cc 19 - 2 [X] Steam — cc 21 - 4 [X] Odors of any type — cc 23 - 6 [ ] None

SOURCE OPERATION DISCHARGES – cc 24: 1 [X] From Stack 2 [ ] At Ground Level 3 [ ] From Vents or other Opening

cc 25 26 27 28: 3 8 (FT.) STACK HEIGHT ABOVE GRADE

D. PROCESS WEIGHT RATE (lbs./hr.) cc 29 30 31 32 33 34 35: 7 2 0 0 0

E. OPERATION TIME hrs/day cc 36 37 38: 1 6

OPERATION: 7426 8

[X] Continuous

[ ] Batch Cycle per batch (hrs.). . . . . CD. COLS. 48 49 50

COLLECTION EQUIPMENT

F. INLET GAS RATE (SCFM) 32,000 — CARD COLS 51 52 53 54 55 56 57: 3 2 0 0 0

G. INLET LOADING — To dryer-cooler dry cyclones. GRAINS/SCF cc 39 40 41 42: 9.3

H. lbs/1000 lbs GAS cc 58 59 60 61

I. PRIMARY COLLECTOR: cc 43 44: 1 0 (See Code Below) — Card Cols. 45 46 47: 9 0

J. SECONDARY COLLECTOR: cc 62 63: 1 2 (See Code Below) — 64 65 66: 9 4

MEASURED – ESTIMATED – EMISSIONS TO ATMOSPHERE (lbs/hr) cc 67 68 69 70 71: 1 5.36 N.

ALLOWABLE EMISSIONS TO ATMOSPHERE (lbs/hr.) cc 72 73 74 75 76: 15.36

13.71

INSTRUCTIONS: (NOTE – Dotted lines indicate position of decimal point. Use additional sheets for miscellaneous comments.)

Item A. Describe your source operation and type of process equipment.

B. List all starting raw materials charged, including solid fuels. Specify lbs/hr. For batch operations specify lbs.

C. Check appropriate boxes and enter discharge information.

D. Indicate the total weight rate of all materials introduced into the source operation. Solid fuels charged will be considered as part of the process weight but liquid and gaseous fuels and combustion air will not. Include recycled material. -- 80% of production.

E. Enter normal operational hours per day for this source operation.

F. Enter rate of gas inlet to collection equipment in standard cubic feet per minute.

G&H. Enter particulate concentration of gas inlet to collection equipment in either column G or H.

I&J. List collection equipment serving the process, code as follows:

01–Absorber 02–Adsorber 03–Catalytic burner 04–Afterburner 05–Spray Chamber 06–Scrubber 07–Packed Tower 08–Venturi Scrubber 09–Settling Chamber 10–Cyclone 11–Multiclone 12–Rotoclone 13–Baghouse 14–Precipitator 15–Masking 16–Other

Enter estimate of collector efficiency (%).

Check type of operation. For batch operation, enter hours per batch cycle.

M. Enter estimate of particulates emitted to the atmosphere from this operation in lbs/hr. Circle Measured or Estimated.

N. Enter allowable emission from Table I, Chapter III of the Regulations.

ILLINOIS AIR POLLUTION CONTROL BOARD

cc 80 FORM B – SOURCE OPERATION DATA

SOURCE OPERATION NUMBER 06 — cc 79 = CARD IDENTIFICATION – PUNCH: 9 — I.D. NO cc 1 – 6

A. DESCRIBE SOURCE OPERATION AND TYPE OF PROCESS EQUIPMENT.

New equipment for controlling emissions from reactor - agglomerator combined exit air

Nominal 12-12-12 as a typical large tonnage grade

OFFICE USE ONLY — BEC NUMBER — BEC FACTOR — CARD COLS

Card Cols. 7 8 9

B. RAW MATERIALS USED IN SOURCE OPERATION FOR NORMAL THROUGHPUT CAPACITY. NORMAL OPERATION IS 2 0 TPH % OF MAXIMUM CAPACITY. 100

MATERIAL	STARTING WEIGHT	MATERIAL	STARTING WEIGHT
1. Ammonium Sulfate	16,760 lbs./hr.	5. Anhydrous Ammonia	1,920 lbs./hr.
2. Triple Super	920 lbs./hr.	6. Sulfuric Acid	2,160 lbs./hr.
3. Potassium Chloride	8,000 lbs./hr.	7. Phosphoric Acid	6,800 lbs./hr.
4. Neutro-Phos	2,000 lbs./hr.	8. Filler	2,700 lbs./hr.

C. EMISSION: Check types of discharge that can possibly be emitted from process or equipment directly to atmosphere through stacks or ducts.

cc 18 - 1 [X] Solid, particulate matter — cc 20 - 3 [X] Gases, vapors or fumes — cc 22 - 5 [X] Mists or Aerosols

cc 19 - 2 [X] Steam — cc 21 - 4 [X] Odors of any type — cc 23 - 6 [ ] None

SOURCE OPERATION DISCHARGES – cc 24: 1 [X] From Stack 2 [ ] At Ground Level 3 [ ] From Vents or other Openings

cc 25 26 27 28: 3 8 (FT.) STACK HEIGHT ABOVE GRADE

D. PROCESS WEIGHT RATE (lbs. hr.) cc 29 30 31 32 33 34 35: 7 2 0 6 0 5

E. OPERATION TIME hrs/day cc 36 37 38: 1 6

L. OPERATION: 4268 — [X] Continuous — [ ] Batch Cycle per batch (hrs.)

CO. COLS. 48 49 50

CARD COLS 51 52 53 54 55 56 57: 9 2 0

COLLECTION EQUIPMENT

F. INLET GAS RATE (SCFM) 9,000

G. INLET LOADING GRAINS/SCF ... To wet scrubber. cc 39 40 41 42: 0.285

H. lbs/1000 lbs GAS cc 58 59 60 61

I. PRIMARY COLLECTOR: (See Code Below) cc 43 44: 0 6

J. SECONDARY COLLECTOR: (See Code Below) cc 62 63

Card Cols. 45 46: 9 0

54

M. MEASURED – ESTIMATED – EMISSIONS TO ATMOSPHERE (lbs/hr) cc 67 68 69 70 71: 2.2

N. ALLOWABLE EMISSIONS TO ATMOSPHERE (lbs/hr.) cc 72 73 74: 2

1-37

INSTRUCTIONS: (NOTE – Dotted lines indicate position of decimal point. Use additional sheets for miscellaneous comments.)

Item A. Describe your source operation and type of process equipment.

B. List all starting raw materials charged, including solid fuels. Specify lbs/hr. For batch operations specify lbs.

C. Check appropriate boxes and enter discharge information.

D. Indicate the total weight rate of all materials introduced into the source operation. Solid fuels charged will be considered as part of the process weight but liquid and gaseous fuels and combustion air will not. Include recycled material. -- 80% of production.

E. Enter normal operational hours per day for this source operation.

F. Enter rate of gas inlet to collection equipment in standard cubic feet per minute.

G&H. Enter particulate concentration of gas inlet to collection equipment in either column G or H.

I&J. List collection equipment serving the process, code as follows:

01-Absorber 02-Adsorber 03-Catalytic burner 04-Afterburner 05-Spray Chamber 06-Scrubber 07-Packed Tower 08-Venturi Scrubber 09-Settling Chamber 10-Cyclone 11-Multiclone 12-Rotoclone 13-Baghouse 14-Precipitator 15-[illegible] 16-Other

K. Enter estimate of collector efficiency (%).

L. Check type of operation. For batch operation, enter hours per batch cycle.

[illegible] Check Measured or Estimated

INDUSTRIAL TESTING LABORATORIES inc.

Chemists
Engineers
Metallurgists

2350 Seventh Blvd. • St. Louis, Missouri 63104

314/PRospect 1-7111

ALLAN M. SIEGEL, Director

IL-SS-07

0366 201754

Report No. 25-1-235 (b)

March 12, 1971

Determination of stack emissions at Swift Agricultural Chemical Corp., Fairmont, Illinois.

Swift Agricultural Chemical Corp.
2 North Riverside Plaza
Chicago, Illinois 60606

P. O. 220-295
Attn: Mr. E. N. Mortenson

TEST REPORT

On March 4, 1971, additional tests were conducted at Swift Agricultural Chemical Corporation, Fairmont, Illinois.

Background on the plant systems and testing procedures are given in two previous I.T.L. reports, No. 25-1-235 and No. 25-1-235(a). These tests were performed in the presence of Mr. A. Telford and Mr. C. Beck of the Illinois Enviornmental Protection Agency.

Due to very low ammonia inventories at the plant on the test date, it was decided that the second test on each scrubber would be reduced to one-half hour duration and sampled on the basis of the velocity data collected for the first sampling period.

Respectfully submitted,

INDUSTRIAL TESTING LABORATORIES, INC.

Allan M. Siegel, Director

AMS/ps

INDUSTRIAL TESTING LABORATORIES inc.

2350 Seventh Blvd. • St. Louis, Missouri 63104

Chemists
Engineers
Metallurgists

314/PRospect 1-7111

ALLAN M. SIEGEL, Director

SUMMARY

Location (Scrubber for)	Granulator	Granulator
Test Number	A	B
Duration, hrs.	1	½
Particulate Emissions *		
Total Particulate, lbs/hr	1.07	0.90
Total Particulate, grains/SCF	0.025	0.021
Fume, lb/hr	0.016	0.013
Fume Weight Percent	1.5	1.4

* Standard Conditions 70°F. and 29.92 in Hg.

Location (Scrubber for)	Granulator	Granulator
Test Number	A	B
Test Date	3/4/71	3/4/71
Time	3:30 p.m.-4:30 p.m.	4:45 p.m.-5:45 p.m.
Ambient Conditions:		
Barometric Pressure, in Hg.	29.65	29.65
Average Temperature, °F.	52	52
Relative Humidity, %	20	20
Collection Equipment:		
Nozzle Diameter, in.	½	¼
Nozzle Area, sq. ft.	0.000341	0.000341
Impingers	Greenburg-Smith	Greenburg-Smith

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ALLAN M. SIEGEL, Director

0366701756

SUMMARY

Location (Scrubber for)	Dryer-Cooler	Dryer-Cooler
Test Number	C	D
Duration, hrs.	1	½
Particulate Emissions*	Doesn't meet Rule 3-3.2512	.005 gr/SCF
Total Particulate, lbs/hr.	18.1	21.6
Total Particulate, grains/SCF	0.069	0.082
Fume, lbs/hr.	0.42	1.15
Fume, Weight Percent	2.3	5.4

* Standard Conditions 70°F. and 29.92 in Hg.

Location (Scrubber for)	Granulator	Granulator
Test Number	A	B
Test Date	3/4/71	3/4/71
Time	3:30 P.M.-4:30 P.M.	4:45 P.M.-5:45 P.M.
Ambient Conditions:		
Barometric Pressure, in Hg.	29.65	29.65
Average Temperature, °F.	52	52
Relative Humidity, %	20	20
Collection Equipment:		
Nozzle Diameter, in.	½	½
Nozzle Area, sq. ft.	0.000341	0.000341
Impingers	Greenburg-Smith	Greenburg-Smith

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ALLAN M. SIEGEL, Director

Report No. 25-4-230 April 21, 1971

Determination of stack emissions at Swift Agricultural Chemical Corporation, Fairmount, Illinois.

Swift Agricultural Chemical Corporation
2 North Riverside Plaza
Chicago, Illinois 60606

Attn: Mr. E. N. Mortenson

E. N. MORTENSON

TEST REPORT

On April 14, 1971 emission tests were conducted on the American Air Filter scrubber (dryer-cooler system) of Swift Agricultural Chemical Corporation, Fairmount, Illinois.

Background information on plant systems and test procedures may be found in previously issued Industrial Testing Laboratories Reports No. 25-1-235, 25-1-235 (a), and 25-1-235 (b).

Mr. Joe Burrough, of the Illinois Environmental Protection Agency, was present while the tests were being conducted.

Respectfully submitted,

INDUSTRIAL TESTING LABORATORIES, INC.

Allan M. Siegel

Allan M. Siegel, Director

es

INDUSTRIAL TESTING LABORATORIES inc.

Chemists
Engineers
Metallurgists

2350 Seventh Blvd. • St. Louis, Missouri 63104 | 314/PRospect 1-7111

ALLAN M. SIEGEL, Director

SUMMARY

Date	4/14/71	4/14/71
Location (Scrubber for)	Dryer-Cooler	Dryer-Cooler
Test No.	1	2
Duration, hours	1	1
Particulate Emissions *		
Total Particulate, lbs/hr.	4.1	2.9
Total Particulate, grains/SCF	0.017	0.012
Fume, lbs/hr.	0.0008	0.0005
Fume, Weight, %	0.2	0.2

* Standard Conditions of 70°F and 29.92 in Hg.

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ALLAN M. SIEGEL, Director

Location - Exhaust Gases from Dryer-Cooler Scrubber Stack

Test No.	1	2
Test Date	4/14/71	4/14/71
Test Time	2:00-3:00 P.M.	3:30-4:30 P.M.
Ambient Conditions		
Barometric Pressure, in Hg.	30.04	30.00
Average Temperature, °F.	62	63
Relative Humidity, %	26	22
Collection Equipment		
Nozzle Diameter, in.	1/4	1/4
Nozzle Area, Sq. Ft.	0.000341	0.000341
Impinger	Greenburg-Smith	Greenburg-Smith
Stack Data		
Traverse Points	6	6
Diameter, in.	38	38
Area, Sq. Ft.	7.87	7.87
Gas Temperature, °F.	102	102
°R.	562	562
Stack Pressure, in Hg.	30.08	30.04
Gas Density (A=1)	0.954	0.954
Volume Output, c.f.m.		
Stack Conditions	30,360	30,360
Standard Conditions	28,790	28,790

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ALLAN M. SIEGEL, Director

Test No.	1	2
Meter Data		
Meter Temperature, °F.	77	74
°R.	537	534
Average Vacuum, in Hg.	7.6	7.1
Average Pressure, in Hg.	22.5	23.0
Sampling Rate, c.f.m.	1.31	1.31
Sample Volume, cu. ft.		
Metered Volume	78.6	78.6
Total Volume (meter cond.)	79.2	79.4
Total Volume (Std. cond.)	59.6	60.6
Particulate Matter Collected		
Water Condensed, mls.	13	17
Alundum Thimble, gms	0.0651	0.0454
Impinger Train, gms	0.0001	0.0001
Total Solid Particulate, gms	0.0652	0.0455
Particulate Output		
Grains/SCF (Total Particulate)	0.0171	0.0116
Pounds/hr. (Total Particulate)	4.21	2.86
Fume, %	0.2	0.2

Calculations

I Volume Output = 64.3 ft/sec × 60 × 7.87 ft² = 30,362 a.f.m.

Standard Conditions $30{,}362 \times \frac{30.08}{29.92} \times \frac{530}{562} =$ 28,786 s.c.f.m.

II Sample Volume (H_2O condensate correction)

$V_1 = .00267 \times \frac{13 \times 527}{22.5} = 0.83 + 78.6 = 79.4$

$V_2 = .00267 \times \frac{17 \times 534}{23.0}$ 1.05 + 78.6 = 79.6

III Sample Volume; Standard Conditions

$V_1 = 79.4 \times \frac{22.5}{29.92} \times \frac{530}{527} = 58.9$

$V_2 = 79.6 \times \frac{23.0}{29.92} \times \frac{530}{534} = 60.7$

IV Particulate Concentration & Dust Load

Test No 1 $\frac{.0652 \times 15.43}{58.9} = .0171 \times \frac{28{,}786}{7000} \times 60 = 4.21$ #/hr

Test No 2 $\frac{.0455 \times 15.43}{60.7} = .0116 \times \frac{28{,}786}{7000} \times 60 = 2.86$ #/hr

V Fume Percent

Test No 1 = $\frac{.0001 \times 100\%}{.0652} = 0.2\%$

Test No 2 = $\frac{.0001 \times 100\%}{.0455} = 0.2\%$

Job: Swift Agricultural Chem Date 4-14-71 Test No 1, 2

Location Dryer Cooler Scrubber Exhaust

Traverse No.	STACK DATA: Millivolts	Temp °F	Draft In. H_2O	Velocity Ft/Sec	METER DATA FOR SAMPLING: Sample Rate CFM	Meter Start	Meter Stop	Sample C.F.	Vacuum In Hg	Temp °F	TIME: Start	Stop
A1	1.55	102	.72	59.5	1.21	70.0	82.1	12.1	6.0	77	2:00 PM	2:10
2	1.56	102	.74	60.5	1.23	82.1	94.4	12.3	7.0	77	2:10	2:20
3	156	102	.72	59.5	1.21	94.4	106.5	12.1	6.8	77	2:20	2:30
4	156	102	.90	66.6	1.36	106.5	120.1	13.6	7.5	76	2:30	2:40
5	156	102	1.02	71.0	1.45	120.1	134.6	14.5	9.0	76	2:40	2:50
6	156	102	.94	68.7	1.40	134.6	148.6	14.0	9.0	77	2:50	3:00 PM
Avg.				64.3	1.31			78.1	7.6	77		
B1					1.21	148.6	160.7	12.1	6.5	74	3:30 PM	3:40
2					1.23	160.7	173.0	12.3	6.5	74	3:40	3:50
3					1.21	173.0	185.1	12.1	7.0	74	3:50	4:00
4					1.36	185.1	198.7	13.6	7.5	74	4:00	4:10
5					1.45	198.7	213.2	14.5	7.8	74	4:10	4:20
6					1.40	213.2	227.2	14.0	7.6	74	4:20	4:30 PM
Avg.					1.31			78.6	7.1	74		

$V_s = 2.9\sqrt{\frac{29.92}{30.08} \times \frac{1}{.954} \times \text{MTS}}$ = $70.2\sqrt{H}$ = Sample Rate = $V_s \times .0204$

Stack Dimensions 3" x 2.5" Stack Area 7.5" Static Pressure 0.04" .50

Ambient Conditions: Temp: 82 Bar Press: @ 30.04 @ 30.00 Relative Humidity @ 16 @ 22

Gas Analysis (Bg Orsat) CO_2 0 CO 0 O_2 21.0 N_2 79.0

Gas Moisture Content: 3.7% Gas Density .954

Collection Nozzle: Dia 1/4 Area 0.000341 sq ft Factor 0.0204

Matter Collected: Solid Particulate _____; Water @ = 13 @ = 17

Smoke Observation: _____

Comments P_s @ 30.08 @ 30.04 V_{mc} @ = 7.6, @ = 562 @ = 537, P_M @ 22.5 $\overline{T_M}$ @ = 7.1 T_s @ = 562; T_M @ = 534 P_M @ 23.0

RICHARD B. OGILVIE
Governor

WILLIAM L. BLASER
DIRECTOR

STATE OF ILLINOIS

ENVIRONMENTAL PROTECTION AGENCY

June 23, 1971

In Reply Refer To:
APC/RRF
ID#504190

ST. CLAIR CO/FAIRMONT CITY
CE 71 114

W. H. Biederman
Director of Engineering
Swift Agricultural Chemicals Corp.
111 West Jackson
Chicago, Illinois 60604

Dear Mr. Bierman:

Permit is hereby granted to Swift Agricultural Chemical Corporation to operate its fertilizer plant in Fairmont City, Illinois, which was constructed pursuant to installation permit CE 70 147 1.

This permit is issued subject to the following conditions: (1) this permit shall not be valid after August 31, 1971. (2) in the event that odors are emitted from the plant during the temporary operating period and are determined to be objectionable beyond the plant boundaries Swift Agricultural Chemicals Corporation shall immediately modify its operation of the plant to reduce the odors to an acceptable level. (3) the emissions from the dryer-cooler shall be tested for particulate matter and fume concentrations. As a minimum such tests shall be conducted when the plant is producing a fertilizer formulating known as 12-12-12. Such tests are to be conducted by a third party and shall be conducted during the temporary operating period.

Respectfully,

John J. Roberts, Manager
Bureau of Air Pollution Control

RRF:ld
cc: Region 4

This permit is granted in accordance with requirements of "Rules and Regulations Governing the Control of Air Pollution" as authorized by the "Environmental Protection Act" approved June 29, 1970, and is subject to the following conditions:

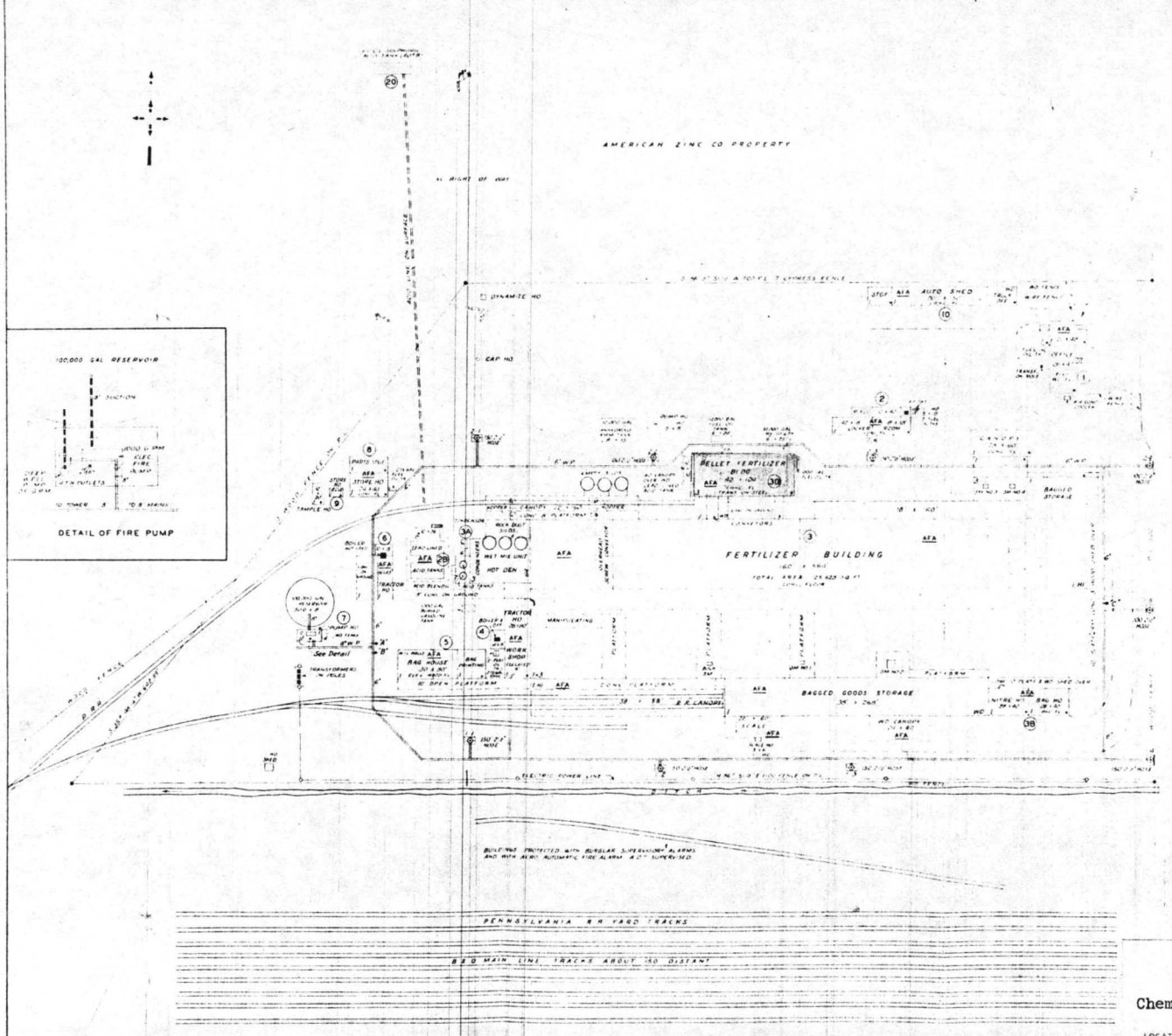
1. If any statement or representation in the application is incorrect, this permit is void and the permittee thereupon waives all rights thereunder.

2. There shall be no deviation from the approved plans and specifications unless additional or revised plans are submitted to the Environmental Protection Agency and a supplemental written permit issued.

3. At any time during or after the construction or the installation of the equipment for which this permit was issued, any agent of the Environmental Protection Agency shall have the right and authority to inspect such equipment.

4. This authority, (a) shall not in any manner affect the title to the premises upon which the equipment is to be located, (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from or arising out of the design installation, maintenance, or operation of the proposed equipment, (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or with applicable local laws, regulations or ordinances. (d) in no manner implies or suggests that the Environmental Protection Agency, or its officers, agents or employees, assumes any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from or arising out of the design installation, maintenance, or operation of the proposed equipment.

5. This permit is subject to review and change by the Environmental Protection Agency as deemed necessary to fulfill the intent and purpose of the Environmental Protection Act and Regulations thereunder promulgated.



PLOT PLAN

DRAWING NO. 105

37

SWIFT CHEMICAL COMPANY
Fairmont City, Illinois
Chemical Fertilizer Manufacturing Plant

LOCATION NO 11-1 SCALE 50 - 1
AUGUST 1962 DRAWN BY J S KELL
EXCESS INSURANCE AGENCY INCORPORATED

ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2209 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERN
WILLIAM L. BLASER, DIRECT

ADDENDUM A
DATA AND INFORMATION
FOR EXISTING EMISSION SOURCE

FAN DATA

FOR OFFICIAL USE ONLY
I.D. NO.
PERMIT NO. S
DATE

1. NAME OF OWNER: SWIFT CHEMICAL CO.	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF EMISSION SOURCE: 2501 North Kingshighway	4. CITY: Fairmont City
5. MANUFACTURER OF FAN: Buffalo Forge Co.	6. MANUFACTURER OF MOTOR: Westinghouse
7. MODEL NUMBER OF FAN: Buffalo #90 MW	8. TYPE OF MOTOR: Totally enclosed
9. TYPE OF FAN BLADE: OW	10. MOTOR HORSEPOWER: 150 Hp
11. IDENTIFICATION OF FAN ON THE FLOW DIAGRAM: B-Z	12. LOCATION OF FAN: Between CY 1 & 2 and SR-2
13. MANUFACTURER OF FAN: Plastic Blower Co.	14. MANUFACTURER OF MOTOR: Allis-Chalmers
15. MODEL NUMBER OF FAN: BPH Series, Size 20	16. TYPE OF MOTOR: Totally enclosed
17. TYPE OF FAN BLADE: Open Impeller	18. MOTOR HORSEPOWER: 50 Hp
19. IDENTIFICATION OF FAN ON THE FLOW DIAGRAM: B-1	20. LOCATION OF FAN: Between R-1 and SR-1
21. MANUFACTURER OF FAN:	22. MANUFACTURER OF MOTOR:
23. MODEL NUMBER OF FAN:	24. TYPE OF MOTOR:
25. TYPE OF FAN BLADE:	26. MOTOR HORSEPOWER:
27. IDENTIFICATION OF FAN ON THE FLOW DIAGRAM:	28. LOCATION OF FAN:
29. MANUFACTURER OF FAN:	30. MANUFACTURER OF MOTOR:
31. MODEL NUMBER OF FAN:	32. TYPE OF MOTOR:
33. TYPE OF FAN BLADE:	34. MOTOR HORSEPOWER:
35. IDENTIFICATION OF FAN ON THE FLOW DIAGRAM:	36. LOCATION OF FAN:
37. MANUFACTURER OF FAN:	38. MANUFACTURER OF MOTOR:
39. MODEL NUMBER OF FAN:	40. TYPE OF MOTOR:
41. TYPE OF FAN BLADE:	42. MOTOR HORSEPOWER
43. IDENTIFICATION OF FAN ON THE FLOW DIAGRAM:	44. LOCATION OF FAN:

38

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR

WILLIAM L. BLASER, DIRECTOR

004

ADDENDUM F
DATA AND INFORMATION
FOR EXISTING EMISSION SOURCE

TANK (Fuel oil)

FOR OFFICIAL USE ONLY
I.D. NO.
PERMIT NO. S
DATE

1. NAME OF OWNER: SWIFT CHEMICAL CO.
2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF EMISSION SOURCE: 2501 N. Kingshighway
4. CITY: Fairmont City
5. NAME OF TANK MANUFACTURER: Unknown
6. DESIGNATION OF TANK: Fuel Oil Storage
7. SERIAL NUMBER: None shown on tank
8. CAPACITY: 10,000 ☐ BBLS ☒ GALS
9. TANK USE: Storage of No. 2 Fuel Oil
10. TANK SHAPE: ☒ HORIZONTAL ☐ CYLINDRICAL ☐ SPHERICAL ☐ OTHER (SPECIFY)
11. TANK DIAMETER: 8.5 FT.
12. TANK HEIGHT: FT
13. TANK LENGTH: 27 FT
14. STATUS: Existing ☐ NEW ☐ ALTERATION
15. TANK TYPE: ☐ PRESSURE ☐ FIXED ROOF ☐ FLOATING ROOF ☐ OTHER (SPECIFY)
16. SEAL: None ☐ SINGLE ☐ DOUBLE ☐ OTHER (SPECIFY)
17. AVERAGE DISTANCE FROM TOP OF TANK SHELL TO LIQUID: 6" at maximum fill FT
18. SHELL TYPE: ☐ RIVETED ☒ WELDED ☐ OTHER (SPECIFY)
19. PAINT COLOR: Gray

VENT VALVE DATA

	TYPE OF VENT	NUMBER OF VENTS	PRESSURE SETTING	DISCHARGE VENTED TO (ATMOSPHERE, FLARE, ETC)
20.	Combination	a.	b. PSIG	c.
21.	PRESSURE	a.	b. PSIG	c.
22.	VACUUM	a.	b. PSIG	c.
23.	OPEN To Atmos.	a.	b. PSIG	c. To atmosphere

MATERIALS TO BE STORED

	MATERIAL	DENSITY	VAPOR PRESSURE AT 70° F
24.	a.	b. LBS/GAL	c. PSIA
25.	a. No. 2 Fuel Oil	b. 7.3 LBS/GAL	c. RVP > 0.10* PSIA
26.	a.	b. LBS/GAL	c. PSIA
27.	a.	b. LBS/GAL	c. PSIA

28. STORAGE TEMPERATURE: MINIMUM 30 °F MAXIMUM 75 °F
29. TANK TURN OVER PER YEAR: Approx. 8
30. MAXIMUM FILLING RATE: 100 gpm ☐ BBLS/DAY ☐ GALS/DAY
31. AVERAGE THROUGH PUT: 300 ☐ BBLS/DAY ☒ GALS/DAY
32. PRESSURE EQUALIZERS USED: ☐ YES ☒ NO
33. VAPOR LOSS CONTROL DEVICE: ☐ YES ☒ NO IF VAPOR LOSS CONTROL DEVICE IS USED, CONSTRUCTION PERMIT APPLICATION FOR AIR POLLUTION CONTROL EQUIPMENT (FORM APC-61) SHALL BE COMPLETED AND SUBMITTED AS PART OF THIS APPLICATION

Shell Agri. Chem.

* Basis information from American Oil Company - Standard oil Div.

Reid Vapor Pressure less than 0.10 PSIA at 100° F

39

APC 76

PAGE 1 OF 1

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

ADDENDUM F
DATA AND INFORMATION
FOR EXISTING EMISSION SOURCE

TANK (Small Anhydrous NH_3)

FOR OFFICIAL USE ONLY
I.D. NO.
PERMIT NO. S
DATE

1. NAME OF OWNER: SWIFT CHEMICAL COMPANY
2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER)
3. STREET ADDRESS OF EMISSION SOURCE: 2501 North Kingshighway
4. CITY: Fairmont City
5. NAME OF TANK MANUFACTURER: Not known - name plate missing
6. DESIGNATION OF TANK: Anhydrous small Ammonia Storage
7. SERIAL NUMBER: Ditto
8. CAPACITY: ☐ BBLS ☐ GALS
9. TANK USE: Liquid Anhydrous Ammonia
10. TANK SHAPE: ☒ HORIZONTAL ☐ CYLINDRICAL ☐ SPHERICAL ☐ OTHER (SPECIFY)
11. TANK DIAMETER: 6 FT.
12. TANK HEIGHT: FT
13. TANK LENGTH: 50
14. STATUS: Existing ☐ NEW ☐ ALTERATION
15. TANK TYPE: ☐ FIXED ROOF ☐ FLOATING RO ☒ PRESSURE ☐ OTHER (SPECIFY)
16. SEAL: ☐ SINGLE ☐ DOUBLE ☐ OTHER (SPECIFY)
17. AVERAGE DISTANCE FROM TOP OF TANK SHELL TO LIQUID: At maximum fill (85% of capacity) 1'-3"
18. SHELL TYPE: ☐ RIVETED ☒ WELDED ☐ OTHER (SPECIFY)
19. PAINT COLOR: Gray

VENT VALVE DATA 2 vents with two safety relief valves

TYPE OF VENT	NUMBER OF VENTS	PRESSURE SETTING	DISCHARGE VENTED TO (ATMOSPHERE, FLARE, ETC)
20. Combination	a.	b. PSIG	c.
21. PRESSURE (Safety)	a. 2	b. 250 PSIG	c. Discharge to atmosphere only in unlikely event tank pressure exceeds 250 psig
22. VACUUM	a.	b. PSIG	c.
23. OPEN	a.	b. PSIG	c.

MATERIALS TO BE STORED

MATERIAL	DENSITY	VAPOR PRESSURE AT 70° F
24. a. Liquid Anhydrous Ammonia	b. 5.08 LBS/GAL	c. 128.8 PS
25. a.	b. LBS/GAL	c. PS
26. a.	b. LBS/GAL	c. PS
27. a.	b. LBS/GAL	c. PS

28. STORAGE TEMPERATURE: MINIMUM 20 °F MAXIMUM 85 °F
29. TANK TURN OVER PER YEAR: 28
30. MAXIMUM FILLING RATE: 50 gpm ☐ BBLS/DAY ☐ GALS/DAY
31. AVERAGE THROUGHPUT: 1300 ☐ BBLS/DAY ☒ GALS/DAY
32. PRESSURE EQUALIZERS USED: ☒ YES ☐ NO
33. VAPOR LOSS CONTROL DEVICE: ☐ YES ☒ NO
IF VAPOR LOSS CONTROL DEVICE IS USED, COMPLETE PERMIT APPLICATION FOR AIR POLLUTION CONTROL EQUIPMENT (FORM APC-61) AND HAS BEEN SUBMITTED AS PART OF THIS APPLIC.

40

APC 76

PAGE 1 OF

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

ADDENDUM F
DATA AND INFORMATION
FOR EXISTING EMISSION SOURCE

TANK (Large Anhydrous NH_3)

FOR OFFICIAL USE ONLY
I.D. NO.
PERMIT NO.
DATE

1. NAME OF OWNER: SWIFT CHEMICAL COMPANY
2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER
3. STREET ADDRESS OF EMISSION SOURCE: 2501 North Kingshighway
4. CITY: Fairmont City
5. NAME OF TANK MANUFACTURER: Not known name plate missing
6. DESIGNATION OF TANK: Large Anhydrous Ammonia Storage
7. SERIAL NUMBER: Ditto
8. CAPACITY: 32000 ☐ BBLS ☒ GALS
9. TANK USE: Liquid Anhydrous Ammonia
10. TANK SHAPE: ☒ HORIZONTAL ☐ CYLINDRICAL ☐ SPHERICAL ☐ OTHER (SPECIFY)
11. TANK DIAMETER: 9'-3" FT.
12. TANK HEIGHT: FT.
13. TANK LENGTH: 62'-9"
14. STATUS: Existing ☐ NEW ☐ ALTERATION
15. TANK TYPE: ☐ FIXED ROOF ☐ FLOATING RO ☒ PRESSURE ☐ OTHER (SPECIFY)
16. SEAL: ☐ SINGLE ☐ DOUBLE ☐ OTHER (SPECIFY)
17. AVERAGE DISTANCE FROM TOP OF TANK SHELL TO LIQUID: At maximum fill (85% of capacity) 2
18. SHELL TYPE: ☐ RIVETED ☒ WELDED ☐ OTHER (SPECIFY)
19. PAINT COLOR: Gray

VENT VALVE DATA 2 vents with two safety relief valves

TYPE OF VENT	NUMBER OF VENTS	PRESSURE SETTING	DISCHARGE VENTED TO (ATMOSPHERE, FLARE, ETC)
20. Combination	a.	b. PSIG	c.
21. PRESSURE Safety	a.	b. 250 PSIG	c. Discharge to atmosphere only in unlikely event tank pressure exceeds 250 psig
22. VACUUM	a.	b. PSIG	c.
23. OPEN	a.	b. PSIG	c.

MATERIALS TO BE STORED

MATERIAL	DENSITY	VAPOR PRESSURE AT 70° F
24. a. Liquid Anhydrous Ammonia	b. 5.08 LBS/GAL	c. 128.8 PS
25. a.	b. LBS/GAL	c. PS
26. a.	b. LBS/GAL	c. PS
27. a.	b. LBS/GAL	c. PS

28. STORAGE TEMPERATURE: MINIMUM 20 °F MAXIMUM 85 °F
29. TANK TURN OVER PER YEAR: 32
30. MAXIMUM FILLING RATE: 50 gpm ☐ BBLS/DAY ☐ GALS/DAY
31. AVERAGE THROUGH PUT: 3700 ☐ BBLS/DA ☒ GALS/DA
32. PRESSURE EQUALIZERS USED: ☒ YES ☐ NO
33. VAPOR LOSS CONTROL DEVICE: ☐ YES ☒ NO
IF VAPOR LOSS CONTROL DEVICE IS USED, AN APPLICATION FOR AIR POLLUTION CONTROL EQUIPMENT (FORM APC-61) SHALL HAVE BEEN COMPLETED AND SUBMITTED AS PART OF THIS APPLIC.

Swift Ach Chem

41

APC 76

PAGE 1 OF 1

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

005

ADDENDUM F
DATA AND INFORMATION
FOR EXISTING EMISSION SOURCE

TANK
(South Phosphoric Acid Tank)

FOR OFFICIAL USE ONLY
I.D. NO.
PERMIT NO. $
DATE

1. NAME OF OWNER: SWIFT CHEMICAL CO.
2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER
3. STREET ADDRESS OF EMISSION SOURCE: 2501 N. Kingshighway
4. CITY: Fairmont City
5. NAME OF TANK MANUFACTURER: Built by prior owners-Manuf. not known
6. DESIGNATION OF TANK: Phosphoric Acid Tank (South)
7. SERIAL NUMBER: Has none
8. CAPACITY: 32000 ☐ BBL ☒ GAL
9. TANK USE: Storage of Wet Process Phosphoric Acid
10. TANK SHAPE: ☐ HORIZONTAL ☐ CYLINDRICAL ☐ SPHERICAL ☒ OTHER (SPECIFY) Open rectangular lead-lin wood vat
11. TANK DIAMETER: Width 12 FT.
12. TANK HEIGHT: 10 FT
13. TANK LENGTH: 36
14. STATUS: Existing ☐ NEW ☐ ALTERATION
15. TANK TYPE: ☐ PRESSURE ☐ FIXED ROOF ☐ FLOATING R ☒ OTHER (SPECIFY) Open top
16. SEAL: None ☐ SINGLE ☐ DOUBLE ☐ OTHER (SPECIFY)
17. AVERAGE DISTANCE FROM TOP OF TANK SHELL TO LIQUID: Not applicable
18. SHELL TYPE: ☐ RIVETED ☐ WELDED ☐ OTHER (SPECIFY)
19. PAINT COLOR: Not painted

VENT VALVE DATA None required - open vat

TYPE OF VENT	NUMBER OF VENTS	PRESSURE SETTING	DISCHARGE VENTED TO (ATMOSPHERE, FLARE, ETC)
20. Combination	a.	b. PSIG	c.
21. PRESSURE	a.	b. PSIG	c.
22. VACUUM	a.	b. PSIG	c.
23. OPEN	a.	b. PSIG	c.

MATERIALS TO BE STORED

MATERIAL	DENSITY	VAPOR PRESSURE AT 70° F
24. a. Wet Process Phosphoric Acid	b. 14.1 LBS/GAL	c. 1 mm Hg* PS
25. a.	b. LBS/GAL	c. PS
26. a.	b. LBS/GAL	c. PS
27. a.	b. LBS/GAL	c. PS

28. STORAGE TEMPERATURE: MINIMUM 30 °F MAXIMUM 70 °F
29. TANK TURN OVER PER YEAR: 7.5
30. MAXIMUM FILLING RATE: 50 gpm ☐ BBLS/DAY ☐ GALS/DAY
31. AVERAGE THROUGH PUT: 3400 ☐ BBLS/DA ☒ GALS/DA
32. PRESSURE EQUALIZERS USED: ☐ YES ☒ NO
33. VAPOR LOSS CONTROL DEVICE: ☐ YES ☒ NO
IF VAPOR LOSS CONTROL DEVICE IS USED, [illegible] PERMIT APPLICATION FOR AIR POLLUTION CONTROL EQUIPMENT (FORM APC-61) SHALL BE COMPLETED AND SUBMITTED AS PART OF THIS APPLIC

*See Fig. 3-1 page 3-61 Chemical Engrs. Hdbk. 4th Ed.

42

APC 76

PAGE 1 OF

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR

WILLIAM L. BLASER, DIRECTO

006

ADDENDUM F
DATA AND INFORMATION
FOR EXISTING EMISSION SOURCE

TANK (Sulfuric Acid Tank)

FOR OFFICIAL USE ONLY
I.D. NO.
PERMIT NO. $
DATE

1. NAME OF OWNER: SWIFT CHEMICAL COMPANY
2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER
3. STREET ADDRESS OF EMISSION SOURCE: 2501 N. Kingshighway
4. CITY: Fairmont City
5. NAME OF TANK MANUFACTURER: Built by prior owners - Manuf.not known
6. DESIGNATION OF TANK: Sulfuric Acid (60° Be) Storage
7. SERIAL NUMBER: Has none
8. CAPACITY: 10,000 ☐ BBLS ☒ GALS
9. TANK USE: Storage of Sulfuric Acid (60° Be)
10. TANK SHAPE: ☐ HORIZONTAL ☐ CYLINDRICAL ☐ SPHERICAL ☐ OTHER (SPECIFY) Open rectangular lead-lined wood vat
11. TANK ~~DIAMETER~~ Width 8 FT.
12. TANK HEIGHT: 7 FT.
13. TANK LENGTH: 24
14. STATUS: Existing ☐ NEW ☐ ALTERATION
15. TANK TYPE: ☐ FIXED ROOF ☐ FLOATING RO ☐ PRESSURE ☒ OTHER (SPECIFY) Open to
16. SEAL: None ☐ SINGLE ☐ DOUBLE ☐ OTHER (SPECIFY)
17. AVERAGE DISTANCE FROM TOP OF TANK SHELL TO LIQUID: Not applicable
18. SHELL TYPE: ☐ RIVETED ☐ WELDED ☒ OTHER (SPECIFY) Lead-Lined Wood
19. PAINT COLOR: Not painted

VENT VALVE DATA none required - open vat

TYPE OF VENT	NUMBER OF VENTS	PRESSURE SETTING	DISCHARGE VENTED TO (ATMOSPHERE, FLARE, ETC)
20. Combination	a.	b. PSIG	c.
21. PRESSURE	a.	b. PSIG	c.
22. VACUUM	a.	b. PSIG	c.
23. OPEN	a.	b. PSIG	c.

MATERIALS TO BE STORED

MATERIAL	DENSITY	VAPOR PRESSURE AT 70° F
24. a. Sulfuric Acid (60° Be)	b. 11.3 LBS/GAL	c. Approx.0.25mm Hg* PS
25. a.	b. LBS/GAL	c. PS
26. a.	b. LBS/GAL	c. PS
27. a.	b. LBS/GAL	c. PS

28. STORAGE TEMPERATURE: MINIMUM 30 °F MAXIMUM 70 °F
29. TANK TURN OVER PER YEAR: 26
30. MAXIMUM FILLING RATE: 50 gpm ☐ BBLS/DAY ☐ GALS/DAY
31. AVERAGE THROUGH PUT: 1000 ☐ BBLS/DA ☒ GALS/DA
32. PRESSURE EQUALIZERS USED: ☐ YES ☐ NO
33. VAPOR LOSS CONTROL DEVICE: ☐ YES ☒ NO
IF VAPOR LOSS CONTROL DEVICE IS USED, COMPLETE AND SUBMIT PERMIT APPLICATION FOR AIR POLLUTION CONTROL EQUIPMENT (FORM APC-61) ~~COMPLETED AND SUBMITTED AS PART OF THIS APPLIC~~

*See table 3-13 Chem. Engns. Hdbk -4th Ed.

44

APC 76

PAGE 1 OF

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

005

ADDENDUM F
DATA AND INFORMATION
FOR EXISTING EMISSION SOURCE

TANK
(North Phosphoric Acid Tank)

FOR OFFICIAL USE ONLY
I.D. NO.
PERMIT NO. $
DATE

1. NAME OF OWNER: SWIFT CHEMICAL COMPANY
2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER
3. STREET ADDRESS OF EMISSION SOURCE: 2501 N. Kingshighway
4. CITY: Fairmont City
5. NAME OF TANK MANUFACTURER: Built by prior owners-Manuf. not known
6. DESIGNATION OF TANK: Phosphoric Acid Storage (North)
7. SERIAL NUMBER: Has None
8. CAPACITY: 32000 ☐ BBLS ☒ GALS
9. TANK USE: Storage of Wet Process Phosphoric Acid
10. TANK SHAPE: ☐ HORIZONTAL ☐ CYLINDRICAL ☐ SPHERICAL ☒ OTHER (SPECIFY) Open rectangular lead-li. wood vat
11. TANK DIMENSIONS: Width 12 FT.
12. TANK HEIGHT: 10' FT
13. TANK LENGTH: 36
14. STATUS: Existing ☐ NEW ☐ ALTERATION
15. TANK TYPE: ☐ FIXED ROOF ☐ FLOATING R. ☐ PRESSURE ☒ OTHER (SPECIFY) Open top
16. SEAL: None ☐ SINGLE ☐ DOUBLE ☐ OTHER (SPECIFY)
17. AVERAGE DISTANCE FROM TOP OF TANK SHELL TO LIQUID: Not applicable
18. SHELL TYPE: ☐ RIVETED ☐ WELDED ☐ OTHER (SPECIFY)
19. PAINT COLOR: Not painted

VENT VALVE DATA None required - open vat

	TYPE OF VENT	NUMBER OF VENTS	PRESSURE SETTING	DISCHARGE VENTED TO (ATMOSPHERE, FLARE, ETC)
20.	Combination	a.	b. PSIG	c.
21.	PRESSURE	a.	b. PSIG	c.
22.	VACUUM	a.	b. PSIG	c.
23.	OPEN	a.	b. PSIG	c.

MATERIALS TO BE STORED

	MATERIAL	DENSITY	VAPOR PRESSURE AT 70° F
24.	a. Wet process phosphoric Acid	b. 14.1 LBS/GAL	c. 1mm Hg* PS
25.	a.	b. LBS/GAL	c. PS
26.	a.	b. LBS/GAL	c. PS
27.	a.	b. LBS/GAL	c. PS

28. STORAGE TEMPERATURE: MINIMUM 30 °F MAXIMUM 70 °F
29. TANK TURN OVER PER YEAR: 7.5
30. MAXIMUM FILLING RATE: 50 gpm ☐ BBLS/DAY ☐ GALS/DAY
31. AVERAGE THROUGH PUT: 3400 ☐ BBLS/DA ☒ GALS/DA
32. PRESSURE EQUALIZERS USED: ☐ YES ☒ NO
33. VAPOR LOSS CONTROL DEVICE: ☐ YES ☒ NO
IF VAPOR LOSS CONTROL DEVICE IS USED, APPLICATION FOR AIR POLLUTION CONTROL EQUIPMENT (FORM APC-61) SHOULD BE COMPLETED AND SUBMITTED AS PART OF THIS APPLIC.

*See Fig. 3-1 page 3-61 Chemical Engrs. Hdbk. 4th Ed.

43

02 04 408 003

X

Twp 11 Bk 01 Pge009 Line 110 SWIFT AGRICULTURAL CHEM CORP

Address of Property:

Pt NE 1/4 SEC 9 & Pt SE 1/4 SEC 4 as desc
in 2241-91 10.33 acres

11,363 82,461 93,824

ENV 70

000-000 4 2N 9W

Previous deed ref. on reverse

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERN
WILLIAM L. BLASER, DIRECT

DATA AND INFORMATION
FOR EXISTING COMBUSTION EQUIPMENT
AND
INDIRECT HEATING

Dryer Burner (E-2)

FOR OFFICIAL USE ONLY
I.D. NO.
PERMIT NO. F
DATE

1a. NAME OF OWNER: SWIFT CHEMICAL CO.	1b. NAME OF OPERATOR:
2a. STREET ADDRESS OF OWNER: 111 W. Jackson Boulevard	2b. STREET ADDRESS OF OPERATOR: 2501 N. Kingshighway
3a. CITY OF OWNER: Chicago	3b. CITY OF OPERATOR: Fairmont City
4a. STATE OF OWNER: Illinois / 4b. ZIP CODE: 60604	5a. STATE OF OPERATOR: Illinois / 5b. ZIP CODE: 62201

6. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):

7. LOCATED WITHIN CITY LIMITS: ☒ YES ☐ NO	8. STREET ADDRESS OF EMISSION SOURCE: 2501 N. Kingshighway
9a. CITY: Fairmont City / 9b. LOCATED WITHIN CITY LIMITS: ☐ YES ☐ NO	10: COUNTY: St. Clair / 11. ZIP CODE: 62201

12. WAS THE EQUIPMENT DESCRIBED IN THIS INFORMATIONAL FORM INSTALLED AT THE PLANT OR PREMISES OF THE APPLICANT ON OR BEFORE APRIL 14, 1972?

☒ YES ☐ NO

IF "NO," STATE WHETHER THE APPLICANT HAD, ON OR BEFORE APRIL 14, 1972, ENTERED INTO A BINDING AGREEMENT OR CONTRACTUAL OBLIGATION TO UNDERTAKE AND COMPLETE, WITHIN A REASONABLE TIME, A CONTINUOUS PROGRAM OF CONSTRUCTION OR MODIFICATION OF THE EQUIPMENT DESCRIBED IN THIS INFORMATIONAL FORM:

☐ YES ☐ NO

13. THE APPLICANT SHALL PROVIDE THE RESULTS OF TESTS CONDUCTED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF CHAPTER 2, AIR POLLUTION, WHICH SHOW WHETHER OR NOT THE EMISSIONS OF CONTAMINANTS FROM THIS EMISSION SOURCE, EITHER ALONE OR IN COMBINATION WITH CONTAMINANTS FROM OTHER SOURCES LOCATED AT THE SAME PLANT OR PREMISES OF THE APPLICANT, COMPLY WITH APPLICABLE SUBSTANTIVE REGULATIONS OF CHAPTER 2, AIR POLLUTION.

IN LIEU OF ONE OR MORE OF SUCH TESTS, THE APPLICANT MAY SUBMIT OTHER STANDARD TESTING INFORMATION OR THE DETAILS AND RESULTS OF ENGINEERING STUDIES SUFFICIENT TO ACCURATELY ESTIMATE THE RATES OF EMISSIONS OF CONTAMINANTS FROM THIS EMISSION SOURCE AND FURTHER TO SHOW WHETHER OR NOT THE EMISSIONS OF SUCH CONTAMINANTS, EITHER ALONE OR IN COMBINATION WITH CONTAMINANTS FROM OTHER SOURCES LOCATED AT THE SAME PLANT OR PREMISES OF THE APPLICANT, COMPLY WITH APPLICABLE SUBSTANTIVE REGULATIONS OF CHAPTER 2, AIR POLLUTION.

Combustion gases from this burner (E-2) vent directly into dryer(R-2) and represent a portion of gases vented at emission source SR-2. Emissions are covered by test reports summarized in exhibit 3.

THESE DATA AND INFORMATION CONSIST OF APPLICATION FORMS AND OTHER EXHIBITS LISTED BY TITLE AND NUMBER OF PAGES BELOW.

APC-86

45

0 3 6 6 0 0 1 9 6 5

I.D. NO. [ ] FOR OFFICIAL USE ONLY PERMIT APPLICATION NO. F [ ]

GENERAL INFORMATION

NOTE: APPLICANT MUST SUBMIT TWO COPIES (THREE IF LOCATED IN COOK COUNTY) OF EACH OF THE FOLLOWING:
1. CONSTRUCTION PERMIT APPLICATION FORM (SEPARATE APPLICATION FORMS FOR EACH ITEM OF CONTROL EQUIPMENT NOT COVERED BY AN ATTACHED ADDENDUM).
2. DIMENSIONED DRAWINGS, PLAN, ELEVATION (SECTIONED WHERE NECESSARY AND WHERE APPLICABLE) AND PLOT PLAN AND MAP SHOWING DISTANCES TO NEAREST BOUNDARY OF THE PROPERTY ON WHICH THE CONTROL EQUIPMENT IS LOCATED, AND THE DISTANCES TO NEAREST RESIDENCES, LODGINGS, NURSING HOMES, HOSPITALS, SCHOOLS, AND COMMERCIAL AND MANUFACTURING ESTABLISHMENTS.
3. FLOW DIAGRAM AS SPECIFIED IN THE INSTRUCTION SHEET.

14. BOILER MANUFACTURER:
15. MODEL NUMBER:
16. SERIAL NUMBER
17. OPERATION TIME OF BOILER: _____ HRS/DAY _____ DAYS/WK _____ WKS/YR
18. PERCENT OF ANNUAL THROUGHPUT: DEC-FEB ___ % MAR-MAY ___ % JUNE-AUG ___ % SEPT-NOV ___ %
19. RATED HEAT INPUT: THOUSAND BTU/HR
20. TOTAL COST OF HEATING EQUIPMENT (NOT INCLUDING INSTALLATION): $
21. OPERATING PRESSURE OF BOILER: PSIG
22. PERCENT CAPACITY USED FOR SPACE HEATING: %

GAS FIRED UNITS

23. GAS BURNER MANUFACTURER & MODEL NUMBER:
24. BURNER VOLUME: FT^3
25. RETENTION TIME: SEC
26. MAXIMUM FIRING RATE: SCFH
27. AVERAGE FIRING RATE: SCFH
28. AVERAGE HEAT CONTENT: BTU/FT^3
29. AVERAGE SULFUR CONTENT: % BY WT
30. EST. ANNUAL CONSUMPTION: SCF
31. EXCESS AIR: % BY VOL

OIL FIRED UNITS

32. OIL BURNER MANUFACTURER & MODEL NUMBER: Iron Fireman A02 - 9.8
33. BURNER VOLUME: 432 FT^3
34. RETENTION TIME: SEC
35. MAXIMUM FIRING RATE: 9,000 THOUSAND BTU/HR
36. AVERAGE FIRING RATE: 4,008 THOUSAND BTU/HR
37. TYPE OF OIL: 2 Fuel Oil
38. EST. ANNUAL CONSUMPTION: 485,888 LB
39. AVERAGE HEAT CONTENT OF OIL: 19,500 BTU/LB
40. EXCESS AIR: 40 - 50 % BY VOL
41. AVERAGE SULFUR CONTENT: 0.28 % BY WT
42. AVERAGE ASH CONTENT: NIL % BY WT
43. OIL BURNER TYPE: ☒ ATOMIZING ☐ STEAM OR AIR ATOMIZING ☐ OTHER SPECIFY _____
44. DIRECTION OF FIRING: ☒ HORIZONTAL ☐ TANGENTIAL
45. OIL BURNER CONTROL: ☐ MANUAL ☐ AUTOMATIC ON-OFF ☐ AUTOMATIC HIGH-LOW ☐ AUTOMATIC FULL MODULATION

COAL FIRED UNITS

46. TYPE OF COAL: ☐ BITUMINOUS ☐ ANTHRACITE ☐ OTHER SPECIFY _____
47. AVERAGE SULFUR CONTENT: % BY WT
48. AVERAGE ASH CONTENT: % BY WT
49. MAXIMUM FIRING RATE: THOUSAND BTU/HR
50. AVERAGE FIRING RATE: THOUSAND BTU/HR
51. VOLATILE CONTENTS: % BY WT
52. EXCESS AIR: % BY WT
53. MAXIMUM SULFUR CONTENT: % BY WT
54. MOISTURE CONTENT: % BY WT
55. AVERAGE HEAT VALUE: BTU/LB
56. IDENTIFY SOURCE OF COAL BY MINE AND SEAM:
57. ANNUAL CONSUMPTION: TONS/YR
58. TYPE OF FIRING:
a. ☐ PULVERIZED DRY BOTTOM
b. ☐ PULVERIZED WET BOTTOM
c. ☐ CYCLONE
d. ☐ SPREADER NO REINJECTION
e. ☐ SPREADER ___ % REINJECTION
f. ☐ OTHER SPECIFY _____
59. DIRECTION OF FIRING: ☐ HORIZONTAL ☐ VERTICAL ☐ TANGENTIAL ☐ CORNER ☐ OTHER SPECIFY _____

0 3 6 6 0 0 1 9 6 6

46

I.D. NO. | | | | | | | | | | FOR OFFICIAL USE ONLY PERMIT APPLICATION NO. F | | | | | | | |

EXHAUST GAS ANALYSIS
(PRIOR TO PASSAGE THROUGH ANY CONTROL EQUIPMENT)

NOTE: IF THE EMISSION SOURCE WHICH IS THE SUBJECT OF THIS CONSTRUCTION PERMIT APPLICATION IS SERVED BY MORE THAN ONE EXHAUST STACK OR VENT, THE APPLICANT SHALL COMPLETE SEPARATE SHEETS FOR EACH SUCH STACK OR VENT.

CONTAMINANT	CONCENTRATION	EMISSION RATE	METHOD OF MEASURE AND ANALYSIS	METHOD OF MONITORING
60. CARBON MONOXIDE	a. PPM	b. LB/HR	c.	d.
61. CARBON DIOXIDE	a. 11% PPM	b. 156 LB/HR	c. Table 9 - 16 Perry's 4th Ed.	d.
62. CHLORINE	a. PPM	b. LB/HR	c.	d.
63. HYDROCARBONS AS CH_4	a. PPM	b. LB/HR	c.	d.
64. HYDROGEN CHLORIDE	a. PPM	b. LB/HR	c.	d.
65. HYDROGEN SULFIDE	a. PPM	b. LB/HR	c.	d.
66. NITROGEN	a. PPM	b. LB/HR	c.	d.
67. NITROGEN OXIDES AS NO_2	a. 24 PPM	b. 0.49 LB/HR	c. See chap. 9 of	d.
68. SULFUR DIOXIDE	a. 11 PPM	b. 0.287 LB/HR	c. Air Pollution Manual HEW - 1967	d.
69. OTHER (SPECIFY)	a. PPM	b. LB/HR	c.	d.
70. PARTICULATE MATTER	a. .045 GRAIN/SCF	b. Est. Avg. 0.075 LB/HR	c.	d.

71. PARTICULATE MATTER COMPOSITION EXPRESSED AS PERCENT BY WEIGHT OF EACH COMPONENT (COMMON NAME SHALL BE GIVEN IF CHEMICAL NAME IS UNKNOWN):

Carbon particles assumed to be major portion of particulate

NOTE: THIS SECTION TO BE COMPLETED ONLY IF EMISSIONS ARE EXHAUSTED DIRECTLY TO THE ATMOSPHERE WITHOUT ANY CONTROL EQUIPMENT:

72. HOW EMISSIONS ARE EXHAUSTED: ☐ STACK ☐ VENT

73. GAS EXIT VELOCITY: FPS

74. GAS EXIT TEMPERATURE: °F

75. DRAFT CONTROLS: ☐ MANUAL ☐ AUTOMATIC ☐ BAROMETRIC ☐ OTHER (SPECIFY)

76. DISTANCE OF THE STACK OR VENT FROM THE NEAREST PLANT BOUNDARY OF THE APPLICANT: FT.

77. HEIGHT OF STACK OR VENT ABOVE GRADE: FT.

78. HEIGHT OF STACK OR VENT ABOVE ROOF: FT.

79. HEIGHT OF TALLEST BUILDING WITHIN 150 FEET: FT.

80. YOUR DESIGNATION OF STACK OR VENT:

81. AREA OF STACK OR VENT AT EXIT: FT^2

82. IF OTHER EMISSION SOURCES OR AIR POLLUTION CONTROL EQUIPMENT ARE EXHAUSTED THROUGH THE STACK OR VENT SERVING THE EQUIPMENT COVERED BY THIS APPLICATION, THE APPLICANT SHALL DEFINE THE EMISSIONS FROM SUCH OTHER EQUIPMENT AND ATTACH SUCH INFORMATION TO THIS APPLICATION AS EXHIBIT G.

TOTAL NUMBER OF PAGES IN EXHIBIT G:

83. THE APPLICANT SHALL SUBMIT AN ESTIMATE OF THE MAXIMUM ONE-HOUR AMOUNTS OF PARTICULATE MATTER, SULFUR DIOXIDE, CARBON MONOXIDE, OXIDES OF NITROGEN, AND HYDROCARBONS (AS METHANE) EMITTED FROM ALL SOURCES LOCATED ON THE PLANT OR PREMISES, INCLUDING THE EMISSIONS ESTIMATED FROM THE EQUIPMENT COVERED BY THIS APPLICATION, AND THE AREA (IN ACRES) OF THE PLANT OR PREMISES OF THE APPLICANT.

MATERIAL	ONE-HOUR MAX. AMOUNTS	MATERIAL	ONE-HOUR MAX. AMOUNTS	MATERIAL	ONE-HOUR MAX. AMOUNTS
PARTICULATE MATTER	35.2 LB	SULFUR DIOXIDE	1.44 LB	NITROGEN OXIDES AS NO_2	2.45 LB
HYDROCARBONS AS CH_4	LB	CARBON MONOXIDE	LB	NH - 134 lbs./hr.max.	

3

APC-86

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

COMPLIANCE PLAN

I.D. NO. ☐☐☐☐☐☐☐☐
PERMIT NO. 0 ☐☐☐☐☐☐
DATE

1. NAME OF OWNER: SWIFT CHEMICAL CO.	7. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
2. TELEPHONE NUMBER: 3/2/431-2533	8. TELEPHONE NUMBER: 618/271-5650 618/874-7811
3. STREET ADDRESS OF OWNER: 111 W. Jackson Blvd.	9. STREET ADDRESS OF EMISSION SOURCE: 2501 N. Kingshighway
4. CITY: Chicago	10. CITY: Fairmont City / 11. LOCATED WITHIN CITY LIMITS ☒YES ☐NO
5. STATE: Ill. / 6. ZIP CODE: 60604	12. COUNTY: St. Clair / 13. ZIP CODE: 62201

THE UNDERSIGNED HEREBY FILES THIS COMPLIANCE PLAN RELATING TO THE EQUIPMENT DESCRIBED HEREIN AND CERTIFIES THAT THE STATEMENTS CONTAINED HEREIN ARE TRUE AND CORRECT, AND FURTHER CERTIFIES THAT ALL PREVIOUSLY SUBMITTED INFORMATION REFERENCED IN THIS APPLICATION REMAINS TRUE, CORRECT AND CURRENT. THE UNDERSIGNED APPROVES EACH AND EVERY PROVISION OF THE PROGRAM DESCRIBED IN THIS COMPLIANCE PLAN AND RELATED PROJECT COMPLETION SCHEDULES.

OWNER (IF INDIVIDUAL)

SIGNATURE DATE

☐☐☐☐☐☐☐☐☐
YOUR IDENTIFICATION NUMBER (OPTIONAL)

OWNER (IF CORPORATION OR PARTNERSHIP)

SWIFT CHEMICAL CO. 1/15/73
EXACT CORPORATE OR PARTNERSHIP NAME DATE

E R Yrabbit
SIGNATURE OF OFFICER TITLE OF OFFICER

A CORPORATE OWNER MUST HAVE ON FILE WITH THE AGENCY A CERTIFIED COPY OF A RESOLUTION OF ITS BOARD OF DIRECTORS AUTHORIZING THE OFFICER SIGNING THE APPLICATION TO EXECUTE THIS COMPLIANCE PLAN, AND TO CAUSE OR ALLOW THE CONSTRUCTION, MODIFICATION AND OPERATION OF THE EQUIPMENT TO BE COVERED THEREUNDER.

Enclosed with letter of transmittal.

THIS PERMIT APPLICATION CONSISTS OF APPLICATION FORMS AND OTHER EXHIBITS LISTED BY TITLE AND NUMBER OF PAGES BELOW.

APC 05

0 3 6 6 0 0 1 9 6 8

14. The applicant shall submit a process flow diagram depicting all emission sources and all air pollution control equipment covered by this Compliance Plan and related Operating Permit application. The diagram shall include labels for each source and equipment, and shall set forth maximum flow rates for (1) all process equipment, (2) all air pollution control equipment, (3) all emission sources and (4) all stacks and vents.

(If this information has been previously submitted with the Operating Permit application, the applicant need not resubmit the diagram but may reference appropriate drawing number(s)).

Number of sheets: 2 Drawing Number(s): 102 & 104 pages 34 & 35

15. The applicant shall submit a detailed description of the equipment he proposes to install to comply with the Environmental Protection Act and applicable substantive Regulations. This description shall include information as to the technical reasonableness of the proposed air pollution control equipment or control techniques, and engineering reports or studies sufficient to prove that the installation of this equipment will result in the operation being in compliance with the Act and applicable substantive Regulations. This equipment shall be accurately and clearly labeled on the process flow diagram. Detailed information for each item of equipment shall be submitted in one of the following three ways:

(a) If the applicant has entered into a binding agreement or contractural obligation to purchase specific items of equipment, he shall complete applicable Construction Permit application forms, and shall note on page one (1) of such forms "This equipment is purchased, but not installed, as part of our Compliance Plan for the operation, and is indicated on drawing (complete as necessary) as item (complete as necessary)." The applicant shall submit a list of those forms so marked and attach to this Plan as Exhibit N.

Total number of pages in Exhibit N: 1 Fuel oil contract will not be entered into until July 1973

(b) If the applicant has selected but not entered into a binding agreement or contracturual obligation to purchase specific items of equipment, he shall complete applicable Construction Permit application forms and shall note on page (1) of such forms "This equipment is to be purchased and installed as part of our Compliance Plan for this operation and is indicated on drawing (complete as necessary) as item (complete as necessary)." The applicant shall submit a list of those forms so marked and attach to this Plan as Exhibit P.

Total number of pages in Exhibit P: _____

(c) If the applicant has selected the type of air pollution control equipment or control techniques but has not selected specific items of equipment, he shall (A) submit performance specificationswhich detail the performance of the equipment to be procured; (B) provide a test plan which will detail how the equipment, purchased pursuant to a given specification, will be tested to prove that the equipment meets the applicable performance specifications; and (C) attach this information to this Plan as Exhibit Q.

Total number of pages in Exhibit Q: _____

16. The applicant shall submit a Project Completion Schedule (Form APC-98) for each item of air pollution control equipment or control technique. The final compliance date of such Project Completion Schedule shall be no later than the applicable date described in Chapter 2: Air Pollution.

Total number of Forms APC-98 submitted with this application: 1

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR

WILLIAM L. BLASER, DIRECTOR

PROJECT COMPLETION SCHEDULE

FOR OFFICIAL USE ONLY

I.D. NO.

PERMIT NO. 0

DATE

1. NAME OF OWNER: SWIFT CHEMICAL CO.
2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF EMISSION SOURCE: 2501 N. Kingshighway
4. CITY: Fairmont City
5. NAME OF AUTHORIZED PERSON PREPARING THIS FORM:
6. SIGNATURE:
7. YOUR IDENTIFICATION NUMBER: (OPTIONAL)
8. DATE THIS FORM 98 PREPARED: January 15, 1973
9. OPERATING PERMIT NUMBER: (IF AVAILABLE)
10. CONSTRUCTION PERMIT NUMBER: (IF AVAILABLE)

THIS FORM MUST BE COMPLETED FOR EACH ITEM OF EQUIPMENT TO BE CONSTRUCTED OR MODIFIED IN ACCORDANCE WITH A COMPLIANCE PLAN.

16. DESCRIBE THE ITEM OF EQUIPMENT TO BE CONSTRUCTED OR MODIFIED:

The steam boiler E-1 burns No. 2 fuel oil presently. This is purchased from American Oil Company, Standard Oil Div. It now contains an average of 0.4% sulfur. To comply with Rule 204(C)(2)(B) on December 31, 1973, the sulfur content of the No. 2 fuel oil will be reduced to less than 0.28% which will give an emission of only 0.287 lbs. $SO_2/10^6$ BTU

12. IDENTIFY THE LABEL OF THIS ITEM OF EQUIPMENT AS GIVEN ON THE APPROPRIATE PROCESS FLOW DIAGRAM:
E-1 as shown on drawings 102 and 104 pages 34 & 35

13. STATE THE PURCHASE PRICE OF THIS EQUIPMENT:
☒ ESTIMATED ☐ ACTUAL $ 6905*

14. STATE THE TOTAL COST (EQUIPMENT PLUS INSTALLATION):
☐ ESTIMATED ☐ ACTUAL $ None **

15. COMPLETE ALL OF THE FOLLOWING INFORMATION IN COLUMNS A AND B. COMPLETE COLUMN C AS APPLICABLE.

	A. EXPECTED DATE ACTIVITY WILL BE COMPLETED	B. LATEST DATE ACTIVITY WILL BE COMPLETED	C. ACTUAL DATE ACTIVITY WAS COMPLETED
a. STATE DATE THE APPLICANT WILL ENTER INTO A BINDING AGREEMENT TO PURCHASE OR MODIFY THIS ITEM OF EQUIPMENT.		See Item 6 above	
b. STATE DATE THE APPLICANT WILL APPLY FOR A CONSTRUCTION PERMIT FOR THIS ITEM OF EQUIPMENT OR MODIFICATION OF EQUIPMENT.			
c. STATE DATE THIS ITEM OF EQUIPMENT WILL BE DELIVERED (IF PRESENT EQUIPMENT IS TO BE MODIFIED, STATE WHEN SUCH MODIFICATION SHALL BEGIN) TO THE APPLICANT'S FACILITY.			
d. STATE DATE CONSTRUCTION OR MODIFICATION OF EQUIPMENT WILL BE COMPLETED.			
e. STATE DATE APPLICANT WILL TEST EQUIPMENT TO DEMONSTRATE COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION ACT AND SUBSTANTIVE REGULATIONS PROMULGATED THEREUNDER.			
f. STATE DATE EQUIPMENT WILL BE FULLY OPERATIONAL.			

NOTE: THE TIME ELAPSED BETWEEN TWO CONSECUTIVE EVENTS LISTED IN ITEM 15 ABOVE SHALL NOT EXCEED 6 MONTHS. IN CASE CONSECUTIVE DATES EXCEED 6 MONTHS YOU MUST INTRODUCE AN INTERIM EVENT OR EVENTS SO THE TIME INTERVAL BETWEEN ANY TWO CONSECUTIVE EVENTS IS 6 MONTHS OR LESS.

* original boiler cost in 1965

** to meet rules no equipment changes will be required. Supplier will provide lower S content fuel

50

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR

WILLIAM L. BLASER, DIRECTOR

ADDENDUM L
DISPOSITION OF SOLID WASTE MATERIAL
FROM
DRY COLLECTORS

FOR OFFICIAL USE ONLY

I.D. NO. 163050AAB

PERMIT NO. 02100690

DATE

1. NAME OF OWNER: Swift Chemical Co.

2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):

3. STREET ADDRESS OF EMISSION SOURCE: 2501 North Kingshighway

4. CITY: E. St. Louis, Il. 62201 (Fairmont City)

5. Describe the processes which result in the production of solid waste material and attach this description to this addendum.

Total number of pages in Exhibit S: 1

6. Describe the state of the waste material (slurry, cake, fine ash, cinders, powder, sludge, etc.) at the applicant's proposed disposal site and attach this description to this addendum as Exhibit T.

Total number of pages in Exhibit T: 1

7. State the chemical composition, expressed as a weight percentage, of the solid waste and attach to this addendum as Exhibit U: Not applicable as process has no solid waste as such, it is all recycled back into the process

8. State the volume and weight of the solid waste generated by this operation on each of the following time intervals: daily, weekly, monthly, and annually. (If these interval bases are not applicable to your operation, you may select different time bases, but must justify such selection.) Attach your answer to this addendum as Exhibit V:

Total number of pages in Exhibit V: not applicable - see note under Item 7

9. Will the solid waste material be deposited in a sanitary landfill permitted by the Environmental Protection Agency? ☐ Yes ☒ No

If "Yes" state the name and Agency permit number of such site.

_____ NAME

_____ PERMIT NUMBER

10. State if the solid waste material will be deposited in a sanitary landfill for which an Agency permit application is pending. ☐ Yes ☒ No

If "Yes" give the name and legal description of this site: _____

_____

11. Will the solid waste material be reused or recycled at the applicant's plant or premises? ☒ Yes ☐ No

If "Yes" describe the reclaiming process and attach to this addendum as Exhibit W.

Total number of pages in Exhibit W: 1

12. Will the solid waste material be transported to a remote site for reuse or recycling? ☐ Yes ☒ No

If "Yes" describe the location and reclaiming process and attach to this addendum as Exhibit X.

Total number of pages in Exhibit X: _____

13. Will the solid waste material be incinerated? ☐ Yes ☒ No

If "Yes" state the name, location, and owner of the incinerator and attach to this addendum as Exhibit Y.

Total number of pages in Exhibit Y: _____

14. If the solid waste will be disposed in a manner not described in Questions 5 through 9 of this addendum, state the method if disposal to be used, the owner and location of the disposal facility, and attach to this addendum as Exhibit Z.

Total number of pages in Exhibit Z: See exhibit W

0366 00197 1

APC-103

51

April 12, 1973

EXHIBIT S

DESCRIPTION OF THE PROCESS WHICH RESULTS IN THE PRODUCTION OF SOLID RECYCLE(WASTE)MATERIAL

Referring to the Process Flow Diagram (Drawing No. 102) Page 34, a maximum of 18,000 scfm of air is drawn through a rotary tube dryer(R-2) to remove moisture from a showering and cascading mass of fertilizer (M.G.) which was mixed and granulated in the ammoniator-granulator(R-1). The moisture content of the M.G. as it enters the dryer(R-2) will range from 5% to 7%. In drying this is reduced to a desired 1.00 to 2.0% depending on the M.G. formulation. The product dryness is only reduced to that level which will insure good product quality in subsequent storage and use.

Dryer air flow entrains particulate during its passage through the showering M.G. and is carried by the air stream into a dry collector of the conventional cyclone type (CY-1). See Exhibit 6, 7, & 8, Pages 29, 30, & 31, for data on particulate size range. Particulate collected therein is conveyed immediately and continuously back to the ammoniator-granulator (R-1) as a part of the return fines or recycle load.

Mixed fertilizer(M.G.) subsequent to drying is then sized into 3 separate fractions by being subjected to screening on an enclosed double deck screen(SC-1). Material larger than the top deck screen mesh, usually a nominal 6 mesh(3.36 mm opening), is diverted to a crusher(CR-1) and then returned directly again to the top section of the double deck screen(SC-1). Material retained on the lower deck of screen SC-1 is the desired product size, nominally a -6+16 mesh, and this discharges to a rotary tube cooler(R-3). Material which passes the 16 mesh (1.19 mm opening) of the lower deck constitutes additional fines which are returned to the ammoniator-granulator(R-1) as part of the recycle load.

The on-size warm product passes through the rotary tube in a showering and cascading fashion counter-currently to a maximum flow of 12,000 scfm of ambient air which primarily cools and secondarily, further drys the product prior to conveying to storage. The flow of air passing through the cooler (R-3) will entrain airborne particulate which is to a large extent captured in dry collector CY-2, a conventional cyclone. The fines from this cooler cyclone collector (CY-2), like those from the double deck screen (SC-1), and the dryer cyclone (CY-1), are gravity fed through enclosed chutes to a belt conveyor discharging these fines along with fresh dry solids feed into the ammoniator-granulator (R-1). The quantity of recycle fines will vary depending on the particular grade of mixed goods (M.G.) being formulated and the physical characteristics of individual ingredients. The amount of return cannot be stated with exactitude for those reasons. However, the weight of fines recycling will range from 0.5 to 2.0 tons per ton of product produced, but for most grades the recycle rate is about 0.75 to 1.0 ton per ton of M.G. conveyed to storage.

EXHIBIT T

DESCRIPTION OF RECYCLE MATERIAL FROM DRY COLLECTORS

There is no waste of material from the dry collectors. Recovered fines constitute dry solids such as superphosphate, ammonium sulfate, potassium chloride, dolomite, etc. These are returned to the ammoniator-granulator as part of the solids recycle. Particulate material which escapes the dry collectors is almost entirely recovered in a subsequent wet scrubber (Rotoclone SR-2) - see drawing No. 102, Page. These solids are which are recovered by return of the concentrated scrubber liquid to either the ammoniator-granulator(R-1) or to the dryer (R-2) or a portion to both. All the solids material entering the dry collectors is recycled. The small fraction escaping is thoroughly documented in Exhibit-B(3) "A Summary of Stack Emission Tests on Dry/Cooler Scrubber Emission Source #12, Page 14".

EXHIBIT W

DESCRIPTION OF RECLAIMING PROCESS

(This is a repetition of description given in the latter portion of Exhibit S):

"The fines from this cooler cyclone collector (CY-2), like those from the double deck screen (SC-1) and the dryer cyclone (CY-1), are gravity fed through enclosed chutes to a belt conveyor discharging these fines along with fresh dry solids feed into the ammoniator-granulator (R-1)"

Particulate which is not captured in the cyclones is almost completely captured in the wet scrubber and the scrubbing solution is reclaimed by return to the ammoniator-granulator (R-1) and dryer (R-2).

ID: 163 050 AAB

COMPANY NAME: ESTECH GENERAL ~~SWIFT~~ CHEMICAL CORP.

PERMIT NUMBER: ⌀2 10 0690

SOURCE			CONTROL			STACK
NO.	NAME	PG	NO.	NAME	PG	NO.
001	AMMONIATOR/GRANULATOR	1924	C01	WET CYCLONE	1935	S01
002	DRYER & COOLER	1931	C02	CYCLONE + CYCLONE + ROTOCLONE		
—		—	—			
003	BOILER	1943				
004	STORAGE TANK	1959				
005	STORAGE TANK	1959				
006	STORAGE TANK	1964				

Rolled in Allied Chemical Tract. 4 4

LOG OF WATER WELL

Property owner General Chemical Co. E. St. Louis Well No. 7

Drilled by Thorpe (Morgan) Year 1940

Formations passed through	Thickness	Depth of Bottom
Black soil	10	10
Yellow clay	5	15
Sandy loam	5	20
Silt	15	35
Dirty sand	5	40
Extremely fine sand	10	50
Sand	10	60
Gt. fine sand	10	70
Coarse sand	5	75
Gt. fine dirty sand	15	90
Coarse sand	25	115
" "	5	120

[Continue on back if necessary]

Finished in ____ at ____ to ____ ft.

Cased with ____ inch COUNTY No. 1884 from 0 to ____ ft.

and ____ inch ____ from ____ to ____ ft.

Size hole below casing ____ inch. Static level from surf. ____ ft.

Tested capacity ____ gal. per min. Temperature ____ °F.

Water lowered to ____ ft. ____ in. in ____ hrs. ____ min.

Length of test ____ hrs. ____ min. Screen ____

Slot ____ Diam. ____ Length ____ Bottom set at ____ ft.

[Show location in Section Plat]

Township name ____ Elev. ____

Description of location SW, SW Sec. 3 T 2N, R 9W

Sec. 3 Twp. 2N Rge. 9W

Signed ____ County St. Clair

St. CLAIR NO ENVELOPE

Copy for Illinois State Geological Survey Index: 3-2N-9W

IL-55-05

(36941—50M—2-67)27-0

Page 1 **ILLINOIS GEOLOGICAL SURVEY, URBANA**

	Thickness	Top	Bottom
Top alum sand-white		0	7
Clay		7	29
Fine sand, brown		29	31
Sand		37	74
Sand coarse		74	115
			TD

Chief aquifer - sand and gravel

Hole record 38"

Casing 20" outside diameter steel + 1.6'- 94.6', 0.0375 wall thickness

Screen record Johnson stainless steel 20", 94.6-115'

Gravel pack: to 38' above screen, WB 40 1/16" to 1/8"

*SE corner of plant, Near East St. Louis.

NO ENVELOPE

COMPANY

FARM Allied Chemical NO. 13

DATE DRILLED 1960 COUNTY NO. 3600

AUTHORITY State Water Survey (W.H. Baker)

ELEVATION 420' TM

LOCATION * 250' S line, 1000' W line of SW

COUNTY ST. CLAIR

3-2N-9W

C. Moore Corporation, Rochester, N.Y. Binder and holes in leaves, each Patented 1906: 386790

TOWN Fairmont TOWNSHIP

COMPANY C. S. Wise No.

FARM General Chemical Co. No.

AUTHORITY C.S.Wise written log

ELEVATION 419 topo.

COLLECTOR Ireland DATE DRILLED 1924

CONFIDENTIAL

Map No. 4

R. 9W T. 2 N Sec. 3

SW SW SW

COUNTY No. 1442

No.	STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil	6		6	
	Clay, yellow	10		16	
	Gumbo	6		22	
	Quicksand	30		52	
	Sand, fine	18		70	
	Sand, coarse	20		90	
	Sand, coarse and gravel	25		115	

4 wells

NO ENVELOPE

County ST. CLAIR Index No. 0403

T.—DRILL RECORD

47327—10M—4-35 4 Illinois Geological Survey, Urbana.

3-2N-9W

For Monks Mound Quad.

LOG OF WATER WELL

Property owner Illinois Farm Supply Well No.

Drilled by H. L. Watson (well + Fin. Co.) Year Apr. 1948

COUNTY No. 1937

Formations passed through	Thickness	Depth of Bottom
Mud	12	12
Fine sand	18	30
Med sand	15	45
Coarse sand	15	60
Fine sand + rock	5	65
Med sand	5	70
Med. sand	5	25
Coarse sand + gravel	5	80
Med. sand + rock	5	85
Fine sand + rock	5	90
Coarse sand + gravel	5	95
" " + rock	5	100 TD

[Continue on back if necessary]

Finished in at to ft.

Raised from Drive at Water 80. 6-5½

Cased with inch black from 0 to 80' ft.

and inch from to ft.

Size hole below casing 10" inch. Static level from surf. 12' ft.

Tested capacity gal. per min. Temperature °F.

Water lowered to ft. in. in hrs. min.

Length of test hrs. min. Screen Johnson

Slot 40 Diam. 10" Length 21'4" Bottom set at 80 -100' ft.

[Show location in Section Plat]

Township name Elev. 420' TM

Typed information from S.W.S. 1-73

Description of location

800' N line, 1300' E line of NE

Sec. 3 Twp. 2N Rge. 9W

Signed County ST. CLAIR

ST. CLAIR NO ENVELOPE

Copy for Illinois State Geological Survey Index: 3-2N-9W